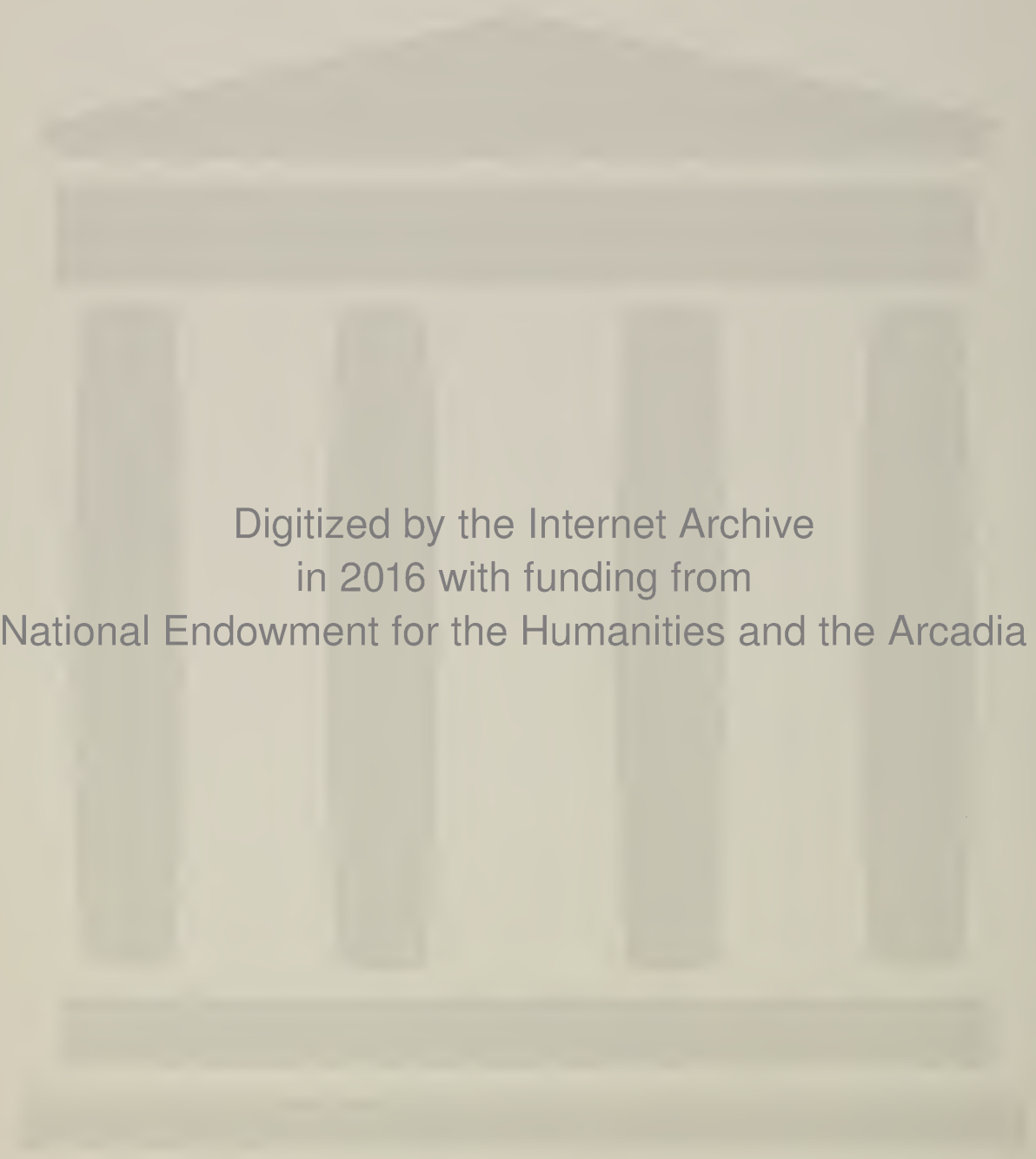


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...lume 105 January, 1978 Number 1

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January, 1978

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"A Litany of Proposed Federal Regulations"

The MSV President points to the threats posed by national health planning guidelines and announces a Vanguard Committee to develop changes.

- *Northern Virginia's Arlington Hospital will be forced to close its OB section. Women in labor, many of them indigent, will have to find a way to get to a hospital in the next county, hopefully not during rush hour on a congested highway, to give birth. Where they are to go for followup care is a moot question—that hospital has no OB outpatient clinic nor does any other hospital in the area.*
- *The Medical College of Virginia will also be forced to close its OB service, as will eight other hospitals in the Central Virginia Health Services Area.*
- *Six hospitals located in that same area will lose their pediatric sections, among them the Medical College of Virginia. Closures or forced mergers will deprive many communities of their local hospitals and there will be similar eliminations of OB, pediatric, and radiation therapy services in Tidewater, the Southwest, and the remaining regions of our state.*

Unfortunately, these examples are only the tip of a massive iceberg which really began forming long before 1974, when Congress was pressured into hastily passing PL 93-641, the National Health Planning and Resources Development Act. After more than 2½ years, in September, 1977, the Department of Health, Education and Welfare issued "National Guidelines for Health Planning," which are alleged to follow congressional objectives in the Act.

Originally, the Guidelines were intended to be just that: voluntary standards and norms designed to help state and local health planning groups draw up their own programs to coordinate health care and control costs. Instead, what has emerged is a litany of proposed federal regulations which local HSA's, including Virginia's, are mandated to adopt within five years, and which generally ignore planning work being attempted locally as well as unique medical needs and resources of each community and its neighboring communities.

In the weeks since the Guidelines were published, as concerned groups and individuals have had an

opportunity to consider the Guidelines' provisions in detail, numerous shortcomings and dangers have come to light. These include a strong probability that some of the numerical values used are empirically incorrect and others were "pulled out of the air," according to testimony given at public hearings.

The result was a deluge of thousands of critical letters from physicians, other health care professionals, and groups of concerned citizens throughout the nation onto HEW and members of Congress. As impressive as the response was, however, I am concerned that many of the physicians who could be minus a hospital to treat their patients and many of the patients who could be minus access to sorely needed medical services appear to be unaware of the Guidelines and their potential impact.

The Medical Society of Virginia has become active in this area. For example, on behalf of the Society, I have written to HEW outlining the many reasons for our concern with the Guidelines and have also alerted the Virginia delegation to Congress, as well as contacting many groups in the private sector.

In the coming months, the Society also will respond to pending congressional review of PL 93-641 itself with positive recommendations for major revisions to the law.

A Vanguard Committee composed of members from each HSA region who are familiar with the activities going on in their area has been set up on an ad hoc basis. Among its many responsibilities will be to develop recommendations for changes in the Planning Act, such as redefinition of the term "health care provider," and to lessen the control the Secretary of HEW has over local health matters.

The Committee also is looking at ways to help doctors and the general public become more aware of local HSA activities, so that the various plans HSAs are charged to develop will serve to enhance delivery of quality care rather than impede it.

However, the Society, its officers and councilors, and the Vanguard Committee can only do so much. If we are to change the direction in which HEW and Congress is headed, as seen in National Guidelines and the Health Planning Act, and if we really care about the quality and cost of health care, and we do, then we must become better informed about issues like this and then tell the others who have a stake in the future of health care, and that is just about everyone, about the dangers being posed.

I urge all MSV members to support and, when possible, participate in the hard job ahead of us all.

William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

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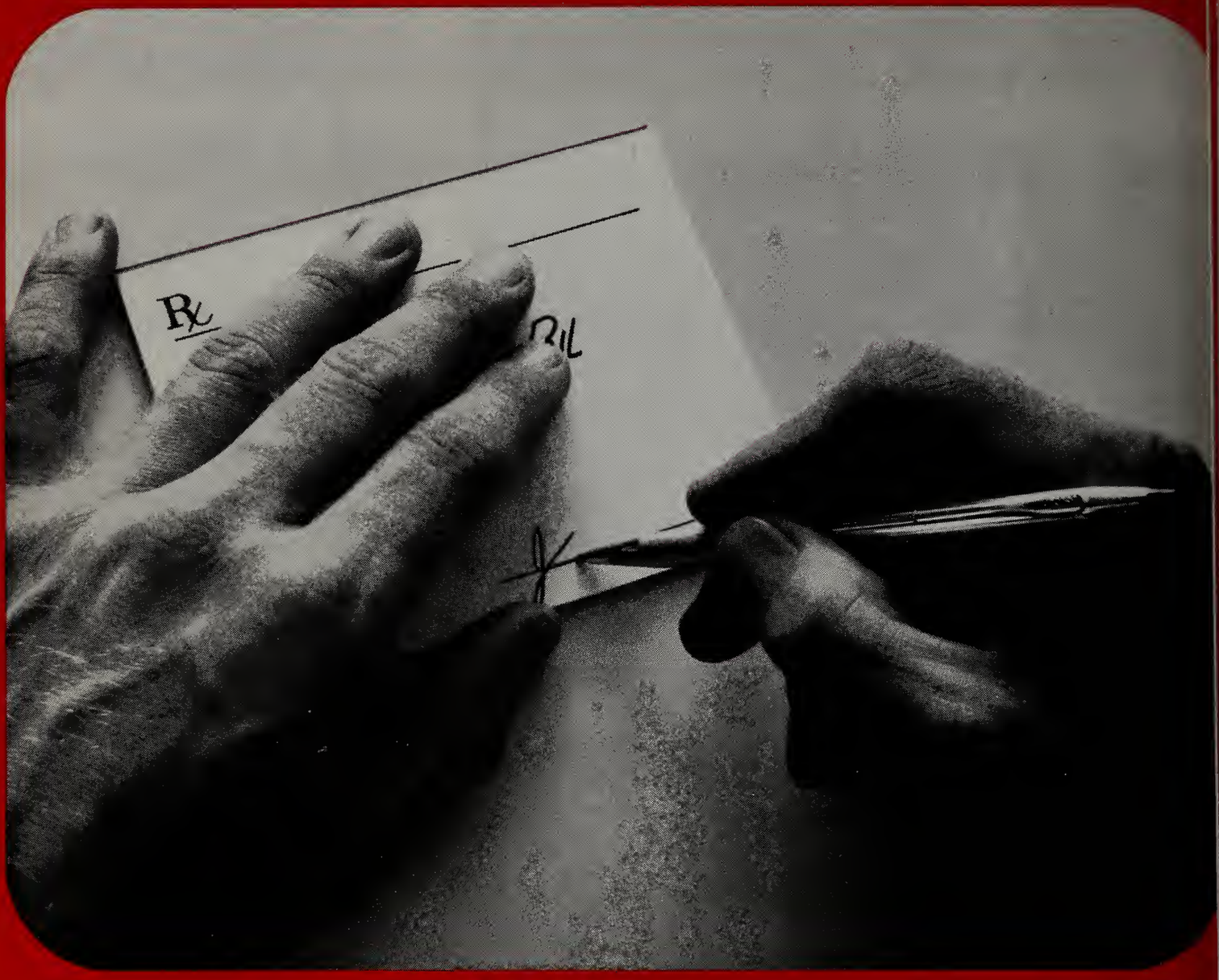
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Hyperuricemia may occur or frank gout may be precipitated in certain patients. Insulin requirements in diabetic patients may be increased, decreased, or unchanged; latent diabetes mellitus may become manifest. Thiazides may increase responsiveness to tubocurarine. Antihypertensive effects of the drug may be enhanced in post-sympathectomy patients. May decrease arterial responsiveness to norepinephrine; this diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If progressive renal im-

LETTERS

Needs Date for "Excellent Review"

In your issue of October, 1977, appears an article by Doctor Feldmann on adjuvant therapy of breast cancer.[1] I could not find in the article the date on which the paper was presented to the Department of Medicine at the University of Virginia.

The information about breast cancer literally pours in constantly. The information contained in this article seems to have been written in the second semester of 1976, when the wave caused by the Bonadonna article, published in the *New England Journal of Medicine,* was still running strong.

In 1977 I have heard here and there that patients treated by Doctor Bonadonna have, at the end of three years, come to the same number of recurrences as the ones in his control group, in almost every category. The pendulum appeared to be swinging to hormonal therapy after estrogen and progesterone receptor dosifications and in the research for biological markers.

Is it possible to obtain updated information from the Charlottesville group that presented the excellent review you published, which we are making reference?

Abelardo A. Ruiz, MD

522 Citizens Trust Building
Portsmouth VA 23704

1. Grand Rounds: Adjuvant therapy of breast cancer. Va Med 104:708-715, 1977

Doctor Feldmann replies:

Doctor Ruiz is correct in dating the Grand Rounds published in the October issue to the spring of 1976. At that time, enthusiasm for adjuvant chemotherapy for breast cancer was running high, but, as I emphasized in my review, the data from Doctor Bonadonna's study were very preliminary.

Continued followup of Bonadonna's series[1] has shown that recurrence rates in treated postmenopausal women are essentially the same as those in controls, although there may be some delay in recurrence in treated women with multiple (four or more) positive nodes. However, Bonadonna's curves for premenopausal women are still significantly different, with the treated group favored. These premenopausal women treated by Bonadonna are the patients in whom ovarian function is likely to be suppressed by the chemotherapy. It may well be, as Doctor Ruiz suggests, that the chemotherapy accomplishes a "medical oophorectomy"; if so, then further followup of Bonadonna's series is likely to show survival results similar to those obtained in studies of surgical oophorectomy[2] and to reveal no real difference in survival between treated and untreated women over ten years.

Overall prognosis following mastectomy for breast cancer appears to be related to estrogen receptor status.[3] Better definition of the receptor status may aid us in identifying patients requiring treatment and may specify a population particularly responsive to adjuvant hormonal manipulation and, possibly, adjuvant chemotherapy. In addition, a careful search for tumor markers[4] such as carcinoembryonic antigen or human chorionic gonadotropin may lead to detection of residual disease after surgery or very early recurrence of disease.

It is as difficult in the autumn of 1977 as it was in the spring of 1976 to make firm recommendations about the early management of operable breast carcinoma. We are perhaps wise to make no hasty conclusions and to maintain a healthy skepticism about projected data.

John E. Feldmann, MD

1720 Springhill Avenue
Mobile ALA 36604

1. Bondonna G et al: The CMF program for operable breast cancer with positive axillary nodes. Cancer 39:2904, 1977
2. Ravdin RG et al: Results of a clinical trial concerning the worth of prophylactic oophorectomy for breast cancer. Surg Gynecol Obstetr 131:1055, 1970
3. Knight W et al: Absent estrogen receptor and increased recurrence rate in breast cancer. Proc Am Soc Clin Oncol 18:271 (abstr), 1977
4. Coombes RC et al: A biochemical approach to the staging of human breast cancer. Cancer 40:937, 1977

Editors' Note: In future, the Editors will take care to date for the reader all Grand Rounds entries.



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Registered Pharmacist
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MEETINGS ABOUT MEDICINE

January

The Alton D. Brashear Postgraduate Course in Head and Neck **Anatomy,** sponsored by Department of Anatomy in cooperation with the Divisions of Continuing Education of the Schools of Medicine and Dentistry, MCV, *Richmond,* January 16-19. Dr. Hugo R. Seibel, MCV Dept. of Anatomy, Richmond 23298.

February

Common **Surgical** Problems in Children, sponsored by Department of **Pediatrics,** University of Virginia School of Medicine, *Charlottesville,* February 8. Office of CME, Box 368, Charlottesville 22901.

Virginia Regional Meeting, **American College of Physicians,** The Homestead, *Hot Springs,* February 11. Edward W. Hook, MD, University of Virginia School of Medicine, Charlottesville 22901.

Magnitude of the **Clinical Influenza** Problem in the USA: Difficulties in the Use of Influenza Virus Vaccines, sponsored by St. Mary's Hospital, Hospital Auditorum, *Richmond,* February 16, 5:30 PM. Edwin L. Kendig, Jr., MD, 5801 Bremo Road, Richmond VA 23226, 804 285-2011.

Southeastern **Surgical** Congress, Annual Assembly, February 19-22, Fairmont Hotel, *New Orleans.* Anne Glade, The Southeastern Surgical Congress, 315 Boulevard, NE, Atlanta, GA 30312, 404 681-3733.

Annual Meeting, Virginia Chapter of the American Academy of **Pediatrics,** *Williamsburg,* February 24–25. Douglas E. Pierce, MD, 1201 Third Street, SW, Roanoke VA 24016.

March

Law Institute on Hospitals and Medicine, sponsored by Departments of **Legal Medicine** and **Hospital-Health Care** Administration, Medical College of Virginia, *Richmond,* March 3. MCV-CME, Box 91, MCV Station, Richmond VA 23298, 804 770–8207.

14th Annual **Radiology** Postgraduate Course: Practical Neuroradiology, sponsored by Departments of Radiology and CME, Medical College of Virginia, Conference Center, *Williamsburg,* March 5-9. Dept. of CME, Box 91, MCV Sta., Richmond 23298.

29th Annual Postgraduate Program of the **Roanoke Memorial Hospital,** *Roanoke,* March 9-10. Charles L. Crockett, Jr., MD, Roanoke Memorial Hospitals, Belleview at Jefferson Street, Roanoke 24033.

Neonatal **Cardiology,** sponsored by Department of **Pediatrics,** University of Virginia School of Medicine, *Charlottesville,* March 16. Office of CME, Box 368, Charlottesville 22901.

April

Current Concepts in Clinical **Infectious Diseases,** sponsored by American College of Physicians, University of Virginia School of Medicine, *Charlottesville,* April 5–7. UVa-CME, Box 368, Charlottesville VA 22901, 804 924–5318.

American College of Physicians **Hematology** Program, University of Virginia School of Medicine, *Charlottesville,* April 12–14. UVa-CME Program.

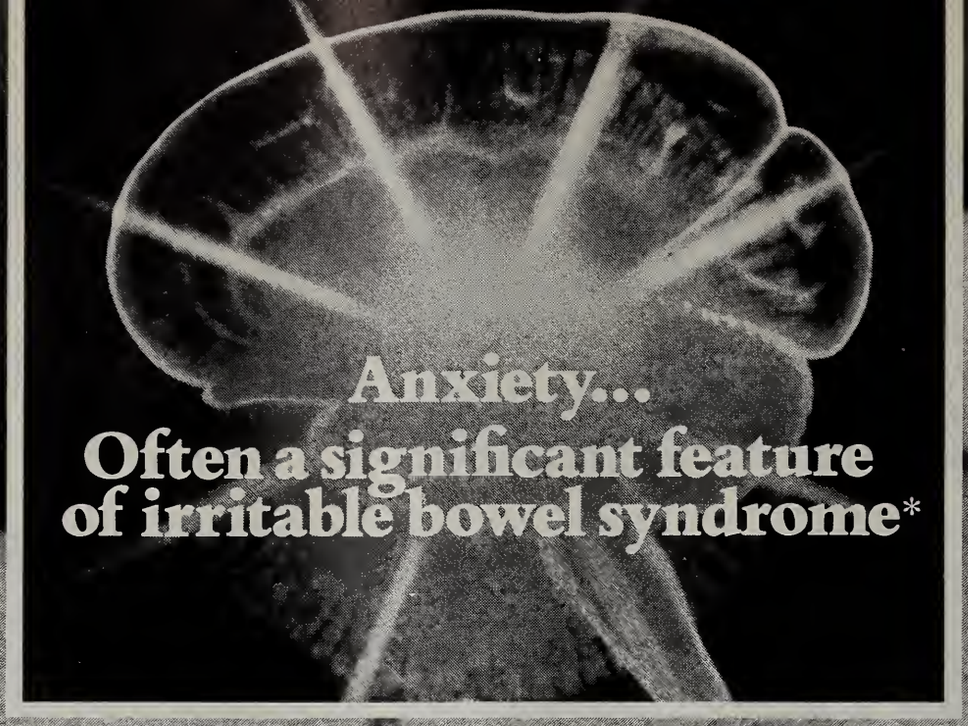
Genetic Counseling for Chromosomal Abnormalities, sponsored by Department of **Pediatrics,** University of Virginia School of Medicine, *Charlottesville,* April 19. UVa-CME Program.

Annual Lecture Series on **Surgery** of the Upper Extremity, sponsored by Divisions of Orthopedic and Plastic-Reconstructive Surgery, Medical College of Virginia, *Richmond,* April 20–22. MCV-CME.

A Day in **Endocrinology,** sponsored by Department of Internal Medicine, University of Virginia School of Medicine, *Charlottesville,* April 21. UVa-CME.

Vest Memorial Lectureship, sponsored by Department of **Urology,** University of Virginia School of Medicine, *Charlottesville,* April 27–28. UVa-CME.

17th Annual Swineford Allergy Conference, sponsored by Allergy Divison, University of Virginia School of Medicine, *Charlottesville,* April 28. UVa-CME.



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VIRGINIA MEDICAL

olume 105 January, 1978 Number 11

Memoir of McLemore Birdsong 1911-1977

Armistead Page Booker, MD, *Charlottesville, Virginia*

"The man walks through the halls with an affable air and a cordial greeting to old and young, high and low. His step is slower. His smile is the same. This morning he walks with The Chief. A sense of pleasure in being Emeritus."

IT IS 8:26. Right on time, as always. The man walks through the halls with an affable air and a cordial greeting to old and young, high and low. Some of the young ones he knew as patients. Some of them are married to each other. He has seen their children, too. They are his "grandchildren". His step is slower. His smile is the same. This morning he walks with The Chief. A sense of pleasure in being Emeritus. And humble pride. Residents' Rounds, gathered about a long table. "Speak to me after this", to one. "What did you find with that child with the high fever?", to another. The meeting begins. It is the time of the "Return of the Ice Age", the winter of '77. "You mean you are telling me that this child has *frostbite?*" Another "gray hair" assures him that it is so because he's seen it before, during the war. "I've been here for over 35 years and I've never seen a pediatric patient with frostbite. But, then we've never had a winter like this before, either."

We all loved him and we miss him very much. He died while taking a nap at his home on the afternoon of June 3. He was 65.

MCLEMORE BIRDSONG was a devoted friend, honored teacher, and respected colleague whose career centered on the University of Virginia School of Medicine. In fact, he said, "My whole life has been the University of Virginia Hospital." To him, the practice of pediatrics, the teaching of medical and nursing students, interns and residents, and clinical research were his lifelong commitments. He was proud of these accomplishments and he truly cared about the people who were involved. He often referred to his former residents as

From the Department of Pediatrics, Univeristy of Virginia School of Medicine, Charlottesville VA 22901.

Prepared and published at the request of the Albemarle County Medical Society.

"my boys". Nowadays, he would have included "my girls".

He was born in Suffolk in 1911, the last child of seven, to an old and well-known Virginia family. He went to Randolph Macon and then to the University of Virginia Medical School, where he graduated in 1937. After interning here, he was a resident in pediatrics from '38 to '40. From '40 to '41, he was at the Children's Hospital in Boston, a year to which he often referred with fond memories and which offered him the chance to know such outstanding teachers of pediatrics as Kenneth Blackfan, Clement Smith, and Charles Janeway. His work there with children with rheumatic fever was the impetus for his later founding of the Rheumatic Fever Clinic at the University.

He returned to the University of Virginia in 1941 as assistant professor of pediatrics with Dr. Lawrence T. Royster, then chairman, and Dr. W. W. Waddell, Jr. His association continued here until his death, by which time he had served as professor, acting chairman from 1960 to 1963, chairman from 1963 to 1964, and professor emeritus, to which position he was named in 1975. This period was during an era of tremendous growth of the medical school, and yet he found time to serve as president of the Albemarle County Medical Society, the Virginia Pediatric Society, and The Medical Society of Virginia; chairman of the Pediatric Section of the Southern Medical Association; and co-founder of the Southern Society for Pediatric Research.

Beside all of that, he was a member of ODK and AOA, and the proud, first recipient of the McLemore Birdsong Award for Outstanding Teaching in the Department of Pediatrics, as well as the equally proud winner of the Distinguished Professor Award of the Alumni Association and the Raven Award of the University of Virginia. In addition, he was especially proud to receive the Louisa Obici Memorial Hospital Award because it came to him from his friends and associates in his hometown of Suffolk. The McLemore Birdsong Chair of Pediatrics was established in 1977 in his honor by his former patients and residents and his friends.

He was very dedicated to the Medical Alumni Association and not only did he faithfully attend its meetings on Alumni Day but he served on its Advisory Committee as a charter member and on its Board as treasurer, secretary-treasurer, faculty coordinator of alumni affairs and emeritus faculty coordinator.

He truly believed in serving his community and did so as a member of the Albemarle County Planning Commission, the Charlottesville Planning Commission, the Board of the Citizens Bank and Trust Company, and the Board of Trustees of Wesley Memorial United Methodist Church. He was a co-founder of the local United Fund.

HE LOVED nature and was not reticent to let it be known that he thought of himself as an expert on azaleas. He had a lovely garden which he thoroughly enjoyed sharing with his friends and he always showed them his "nursery" where he raised more azaleas from clippings.

And as if all of this were not enough, he was sought out by many who valued his advice. He was a kind, loyal, and uncritical friend. He was known for his honesty, hospitality, and humor. "There are so many people around here now that I don't even know all of the people in the department, and I'll bet Thurman doesn't either." Later, the day before he died, the departmental staff is gathered on the steps of the medical school for the annual photo. Slowly, toward the front row, around the corner, in a long doctor's coat, comes Dr. Mac (he hated to wear a white coat). In a quiet voice with a wry grin, "Now I'm a real doctor".

He enjoyed himself as an honored guest, the night before he died, at the annual awards dinner of the Department in the Dome Room of the Rotunda.

But after all of his marvelously satisfying professional and community involvement, when he was asked what he considered to be the greatest achievement of his life, he said that it was being married to Charlotte. It was their pride to have three sons. Finally, he got his girl, as two of his three grandchildren are girls.

The character of Dr. Mac can be seen in this facet of his professional career. When he was named acting chairman, he took on the additional details with the same dedication that he had given to teaching, practice, and research. "But I despised it. You know, we all want to get to the top but that isn't always the best place for each person. I found in my own case that all the duties of the position kept me from doing the things I really like to do."

What more can be said?



Medicine at the General Assembly 1978

In its session now in progress, Virginia's General Assembly will consider much legislation of significance to physicians. Here is a comprehensive report of that legislation, prepared especially for MSV members by the Legislative Committee, Glenn B. Updike, Jr., MD, Chairman. The Committee's recommendations, which were approved by the House of Delegates at the Annual Meeting, follow the explanations of the legislative items.

1. Malpractice Legislation/Liability Insurance Costs.

Two years ago, the General Assembly took several significant steps to try to slow the rapid increase in the cost of liability insurance for physicians. Last year, the General Assembly also acted to broaden the disciplinary powers of the State Board of Medicine. While all of these steps will help to limit future increases in liability insurance rates, the Society believes that a number of other legislative changes will significantly limit liability insurance rates and thereby reduce health care costs.

Included are the following proposals: 1) elimination of the ad damnum clause; 2) use of periodic payments for money judgments where damages are awarded in anticipation of future costs; 3) providing some form of judical control over contingency fees to insure that abuses do not occur; 4) modifying the present Statute of Limitations on claims by minors; and 5) modification of the collateral source rule to prohibit double recovery for the same injury.

Recommendation: The Society believes that each of these proposals is meritorious and urges the General Assembly to give each proposal careful consideration. Our principal interest is in finding some way to eliminate the inequities in exposing a physician to a claim by a minor that can be filed as long as 20 years after the date of the alleged injury. **Note:** In rare agreement with the medical profession's goals, the Department of Health, Education and Welfare is on record as favoring the position of this recommendation. Excerpts from a HEW study, "Legal Topics Relating to Medical Malpractice," are on page 28.

2. Mandatory Continuing Education for Relicensure.

The Board of Medicine will reintroduce HB-191, calling for mandatory continuing medical education for relicensure for all physicians in the state. The Society has recently adopted a CME requirement for continued membership in the Society. Many hospitals and speciality societies have adopted or are in the process of adopting a CME requirement. The Joint Commission on Accreditation of Hospitals now requires all medical staff to participate in a program of continuing education for approval and "the degree of participation of each staff member shall be documented".

It was felt that almost all practicing physicians within the state will soon be required to submit proof of some type of continuing medical education and that legislation for mandatory CME for relicensure is unnecessary and should be opposed.

Recommendation: That the Society continue to oppose mandatory continuing medical education for relicensure. Component medical societies should also be encouraged to establish a CME requirement for membership.

3. Licensure by Board of Medicine of Clinical Psychologists.

A bill will be reintroduced by the Board of Medicine to examine and license clinical psychologists—at their request. It was felt that this matter should be handled as an internal decision of the two parties involved.

Recommendation: No position.

4. Practicing the Healing Arts Illegally.

The Board of Medicine will introduce legislation during this session to amend the Code to make it a felony to practice the healing arts in Virginia without a license.

Recommendation: Support.

5. Placing of Children for Adoption by Physicians.

A joint subcommittee is studying the participation of lawyers, doctors, and others in the illegal placement of children for adoption. The Virginia Obstetrical and Gynecological Society has adopted a resolution urging that physicians in Virginia be permitted to participate in the adoption process without control or approval of the State Welfare Board. The Society has prepared a bill that will permit such participation by physicians, with appropriate safeguards.

Recommendation: Urge the joint committee to support the Society's bill.

6. Death with Dignity.

It is anticipated that a California-type Death with Dignity bill will again be indtroduced. The Society has opposed the need for such legislation for the past three years.

Recommendation: Reaffirm opposition to this bill.

7. Mandatory Obstetrical Care Insurance.

The Society has been requested by our Maternal Health Committee to support the concept and introduce a bill making obstetrical coverage mandatory in all health insurance policies sold in Virginia.

Recommendation: Oppose the concept of requring every health insurance policy to provide maternity coverage. Support the concept of every insurer making such coverage available to provide for complete maternity care on the same basis as other medical and surgical procedures.

Reimbursement of maternity services should be based on the usual, customary and reasonable (UCR) charges for those services according to the same formula by which UCR charges for other medical and surgical procedures are reimbursed. Coinsurance and deductibles for complete maternity care should not differ from those applied to other medical and surgical procedures.

MSV Positions Indexed:

Support

1. Liability insurance cost legislation.
4. Bill to make it a felony to practice the healing arts without a license.
5. Bill to permit physician to participate in the adoption process, with appropriate safeguards.
7. Legislation making maternity care an available elective in all health insurance policies sold in Virginia.
8. Bill to provide immunity for state and component medical society peer review investigations.
9. Bill eliminating gross receipt taxes and amending sales and income tax laws.
11. Bill to require any person practicing the healing arts and using the title "Doctor" to indicate name or initials of his profession.
14. Bill prohibiting age discrimination in employment practices.
15. Study of steps that might be taken to reduce health care costs.
16. Attempts to resolve conflict between federal law and the risk management legislation adopted in 1977.
17. Attempts to resolve ambiguity in scope of immunity provided by sterilization laws.
18. Concept of HB-1983, relating to records of recipients of mental health or developmental disability services.
19. Revision of Health Code.
20. Amendment that would confirm statutory prohibition against direct payments to psychologists.
22. Request for financial support by the Virginia Tumor Registry.
23. Amendment to present Workman's Compensation Law to preserve the right of patient to select his physician with reasonable cost paid by his employers.
25. Sexual Assault Bill.
26. Reporting of impaired drivers

Oppose

2. Mandatory continuing medical education for relicensure.
6. Passage of living will and death with dignity legislation (HB-1840).
10. Bill to legalize manufacture and distribution of Laetrile in Virginia.
12. Further efforts to repeal Motorcycle Helmet Law.
13. Bill to redefine practice of optometry and permit optometrists to use any drugs in the eye.
27. Certificate of Need Law.

No Position

3. Examination and licensure of clinical psychologists by Board of Medicine.
23. Proposed Emergency Medical Service Bill (pending final draft to MSV Legislative Committee for review and position).
28. Premarital blood test for susceptibility to rubella.

HEW Position on MD Liability

In a study titled "Legal Topics Relating to Medical Malpractice", published in January, 1977, the US Department of Health, Education and Welfare recommended these positions. They are remarkable in their concord with the positions of physicians.

Elimination of Ad Damnum Clause.

The amount the plaintiff alleges as his damages in a complaint is subject to no control. It is common practice to insert a high figure that is beyond the reasonable expectations of even the plaintiff. HEQ recommends legislative changes to eliminate the ad damnum clause. The study states: "The inclusion of a specific dollar amount claimed serves no useful purpose in medical malpractice litigation. In addition, as the ad damnum amount is often an inflated guess at the plaintiff's damages, particularly in a serious case, there is a risk that the statement of an ad damnum amount will create inflammatory publicity and decrease the likelihood of a settlement. . . . In 1975 and 1976, 27 states abolished the ad damnum pleading."

Use of Periodic Payments for Damages Awarded in Anticipation of Future Costs.

The study recommends that "legislation should be enacted in all states to permit the payment of future damages in periodic installments." The study states that, under the present system, "the trier of fact can only return a lump-sum award. As a result the present value of all future loss must be estimated. If a judgment is for periodic payments, however, installments will be paid over the plaintiff's actual lifetime or period of disability—no more or no less. In addition, arrangements can be made under which a periodic payments judgment can be funded by the insurer to provide necessary security to the plaintiff," yet at a "significantly lower cost to the insurer than an equivalent lump-sum payment. . . . Thirteen states have adopted legislation permitting periodic payments in appropriate cases."

Judicial Control of Contingent Fees.

The use of contingent fees is in many cases essential, but there is potential for abuse. Twenty state legislatures have recently adopted statutes to provide some control over contingent fees. The study recommends "a decreasing maximum schedule for contingent fees should be set by court order, provided that such schedule should not be so restrictive, particularly with respect to small to moderate recovery, that it hampers the ability of injured patients to obtain legal representation."

Statute of Limitations for Minors.

At least 17 states have acted to change the traditional rule that the statute of limitations for a minor does not begin until he reaches majority. The study states: "The statute of limitations should apply equally to adults and minors alike, except that a minor's representative should have until the minor's eighth birthday to commence a suit, regardless of how many years earlier the cause of action accrued."

A supporting statement reads: "The staff has reached what it considers to be a reasonable compromise between the needs of injured minors and those of potential defendants and insurers. Below a certain age, the child may not realize that something is wrong or may be unable to communicate his complaint adequately. Moreover, since a young child is developing rapidly during his early years, many injuries are difficult to detect and evaluate. However, there is also legitimacy in the argument of many physicians and insurers that a rule which protects a minor until he reaches adulthood is unfair, since facts become stale, medical standards change and the risk of actions many years in the future cannot be predicted by actuaries. The argument is also made that the law relies on a minor's parents or other legal representative to protect his rights in many other contexts, and that there is no reason not to do so in the medical malpractice situation. It seems fair, therefore, that there should be a minimum age until which a minor's representative may sue, even though the general statute would have expired.

Modification of Collateral Source Rule.

The collateral source rule prohibits the introduction into evidence of any indication that a patient has been compensated or reimbursed for his injury by any source other than the defendant, such as workman's compensation or private health insurance. The HEW study recommends that recovery of damages should be reduced by collateral source payments. It states: "The idea of a windfall runs counter to the basic aim of the tort law, which is to make the plaintiff whole, not to over-compensate him."

8. Immunity for Component Society Investigations.

Legislation enacted within the past few years for the purpose of providing immunity for those physicians engaged in peer review activities does not cover judgments made in considering applications for membership in, and the disciplining of members of, local and state medical societies.

Recommendation: Introduce a bill that would give state and component medical society officials immunity with respect to reports on membership matters.

9. Gross Receipts and Professional License Tax Bill.

Legislation will be introduced to eliminate all gross receipts taxes. Lost revenue would be recovered by broadening categories of services subject to the sales tax and by ½% increase in the maximum corporate and personal income tax rate.

Recommendation: Support such legislation.

10. Laetrile.

A bill legalizing Laetrile for manufacture and distribution in Virginia will no doubt be introduced during the 1978 session. Council has endorsed the AMA position on Laetrile and has recommended that the Virginia legislators be advised accordingly. They would, at the same time, be advised of the availability of expert witnesses on the subject.

Recommendation: Oppose such legislation and disseminate educational material to members of the General Assembly.

11. Restriction of the Use of the Word "Physician".

A resolution from the Prince William County Medical Society requests a bill be introduced to require the word "physician" be restricted only to those who are graduates of schools of medicine or osteopathy. Anyone using the title "Doctor" other than a physician would be required to use the name or initials of the profession concerned.

Recommendation: Introduce bill.

12. Repeal of Motorcycle Helmet Law.

Another attempt at repeal of the Motorcycle Helmet Law is expected.

Recommendation: Reaffirm the Society's opposition to the repeal of this law and develop a data base to be used in an effective and meaningful analysis of the helmet requirement.

13. Optometrists' Use of Drugs.

A bill redefining the practice of optometry and permitting optometrists to use diagnostic drugs in the eye will be introduced.

Recommendation: The Society reaffirm its opposition to optometrists' use of drugs.

14. Age Discrimination in Employment Practices.

An AMA model bill would make it unlawful for an employer to discharge or refuse to hire an individual or otherwise discriminate against an individual with respect to compensation, conditions, privileges, or other terms of employment because of the individual's age. An employer would not be prohibited from taking actions based upon reasonable considerations other than age. The bill would only apply to those individuals who are at least 40 years of age, but unlike the Federal Act, it does not contain a maximum age limitation.

Recommendation: The Society endorse the bill in principle.

15. Reduction of Health Care Costs.

A request for a study of health care costs is expected. Mandatory rate review for hospitals may also be introduced.

Recommendation: Support study of steps that might be taken to reduce health care costs. Ensure that study includes concept of meaningful deductible and coinsurance requirement as well as review of costs of liability insurance and possible legislative changes to reduce such costs.

16. Amendments to Risk Management Statute.

The Risk Management Statute adopted last session has an apparent conflict with federal reguations prohibiting disclosure of treatment for alcoholism and drug abuse. Amendments might be required to resolve the conflict; HEW's position on the conflict has been requested.

Recommendation: Attempts be made to resolve the conflict between state and federal law.

17. Sterilization Regulations.

Several questions have been raised relating to conflicts as to the scope of the immunity provided under the present sterilization laws. The Society feels that further clarification of these laws would be desirable.

Recommendation: Attempts be made to resolve the ambiguity in the scope of the immunity provided by the sterilization laws.

18. Disclosure of Medical Health Records (HB-1983).

HB-1983, relating to records and regulations of recipients of mental health of developmental disability services, was killed in 1977. This bill contains several desirable concepts and should be considered subject to making it compatible with the risk management legislation.

Recommendation: Support concept—but eliminate potential conflict with risk management legislation.

19. Revision of Title 32.

A complete revision of Title 32, the Health Chapter of the Code of Virginia, is presently in progress. This revision should be carefully reviewed when completed.

Recommendation: Bill not available at this time.

20. Direct Payment to Psychologists.

An amendment that would confirm the statutory prohibition against direct third-party payments to psychologists may be introduced during the 1978 Session.

Recommendation: Support amendment, if introduced.

21. Emergency Medical Services.

A first draft of a comprehensive emergency medical services bill was considered to be too comprehensive. The increase in government regulation was considered to be unnecessary and very expensive. The Society has been advised that the bill is being revised.

Recommendation: The Society supports the concept of local, voluntary structure for emergency medical services with provision for regional triage and transit.

22. Tumor Registry.

The Cancer Committee has recommended that the Society strongly endorse the Virginia Tumor Registry. The Registry at the present time is in vital need of funds if its work is to continue. A request for financial support will be made to the 1978 General Assembly.

Recommendation: Support.

23. Workmen's Compensation.

The Fairfax County Medical Society has experienced some problems pertaining to physicians treating county employees and then being refused workmen's compensation payments. The County provides a list of authorized treating physicians to whom the patient must go, and if the patient chooses to go to any other physician, he must pay for the treatment himself, except in an emergency.

Recommendation: Introduce amendment and support.

24. Environmental Regulation.

A bill to transfer control of the regulation of certain environmental matters from the State Health Department to another agency is expected.

Recommendation: Society supports the concept of leaving environmental matters pertaining to health under the control of the State Department of Health.

25. Sexual Assault Bill.

The Committee on Sexual Assault Reform has proposed a comprehensive bill to improve present state laws.

Recommendation: Agree in concept but final position to be determined by the Legislative Committee after reviewing final draft.

26. Reporting of Impaired Drivers.

Support concept of permitting physicians to report impaired drivers to the Division of Motor Vehicles with immunity provided to the reporting physician.

Recommendation: Legislative Committee to review final draft for final support.

27. Certificate of Need Law.

One local Health Systems Agency may attempt to change the Certificate of Need law to reduce the authority of state regulators and increase the authority of local HSAs.

Recommendation: Strongly oppose.



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Virginia's Legislators Address The Needs of Children

Andre P. Derdeyn, MD, *Charlottesville, Virginia*

Recent revisions of Virginia's juvenile code reflect a heightened concern for the child's welfare, particularly in the crucial area of adequate parental care.



The revision of the Virginia juvenile code by the 1977 General Assembly will have far-reaching effects upon children who are abused, neglected, or placed in foster care.[1] Much of the law relates to older children, but significant portions address the needs of young children at risk to their development due to discontinuities in their relationship with nurturing persons.

The recent Virginia legislation attempts to respond to important current issues, such as increased awareness of the extent of the problems of abuse and neglect. Another factor is the emphasis on the child's stable relationship with a caring adult. In addition, there is the recognition that foster care has serious shortcomings, in that it has too often turned out to be inadequate as the temporary expedient that it is designed to be,[2,3] and it has too infrequently provided the continuity of relationships so important to the child's development. Approaches to these problems can be grouped according to two different goals: limiting the utilization of foster care and facilitating adoption.[4] Both these goals are addressed by the new law.

The new legislation provides for rehabilitative services and facilitates the child's remaining at home, thus preventing entry into foster care. For children already in foster care, the new code provides for foster care planning and review of cases, and for more efficacious termination of parental rights, encouraging exit from foster care either by return home or by adoption. The new legislation also attempts to improve long-term foster care by making a new legal designation of permanent foster care placement.

Limiting Entry to Foster Care

Both the 1975 Virginia child abuse and neglect law[5] and the new code reflect an emphasis upon maintaining the child in the parental home, if at all possible.

Emergency removal of a child from the parental home is severely restricted by the new legislation. Such removal can take place only by court order on the basis of a petition or sworn testimony which establishes that the child suffers "an imminent threat to life or health to the extent that severe or irremediable injury would be likely to result if the child were . . . left in the custody of his or her parents," and that the child can be adequately protected by "no alternative less drastic than removal . . . from his or her home." Whenever a child is taken into custody by means of an emergency removal order, a hearing must take place no later than five days after removal of the child. It remains possible for a physician, protective service worker or law enforcement worker to take a child into custody for up to 72 hours in cases where the child is in "imminent danger" and "severe or irremediable injury would be likely to result." This procedure is possible only when a court order is not immediately obtainable and when a court has set up procedures for placing such children. An emergency removal order must be obtained within 72 hours. It is to be expected that the new law will lead to a decrease in unnecessary disruptions of relationships with biological parents.

Facilitating Exit from Foster Care

Foster Care Plan and Review. The proposed law calls for the preparation of a foster care plan for each child, and for the filing of that plan with the juvenile and domestic relations court. The intent of the law that foster care be a temporary expedient is clear. "Such plan shall be designed to lead to the return of such child to his or her parents or other prior custodians within the shortest practicable time which shall be specified in the plan." The law states, however, that if "it is not reasonably likely that the child can be returned to his or her prior family within a practicable time," adoption or permanent foster care placement may be planned. The proposed law requires that the court be petitioned in the cases of those children "who have not been returned to their prior family or placed in an adoptive home or permanent foster care placement within 12 months following the filing of a foster care plan." If the judge determines that the case warrants it, a court review is held.

Termination of Parental Rights. When child abuse first came to public attention, reporting laws were added to the previously existing child neglect legislation. There was also increased legislative activity regarding laws for terminating parental rights, thereby freeing children from adoption. Virginia responded quickly with a reporting law, but has only now formulated modern legislation for terminating parental rights. Previously, termination of parental rights took place on the case law grounds of parental unfitness or abandonment, whereby the court must determine the parents to be in some way at fault by making findings as to the biological parents' intent or blameworthiness. Thus, courts have been precluded from making objective findings regarding the needs of children for stable nurturing relationships, for they must first pass judgment upon the parents in order to free the child for adoption. This has been the situation even when the child has been a fully integrated member of the family of prospective adoptive parents.[6]

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Submitted 3-15-77.

The proposed law provides that parental rights of a child found by the court to be abused or neglected may be terminated when "the neglect or abuse . . . presents a serious and substantial threat to the [the child's] life, health, or development; and it is not reasonably likely that the conditions which resulted in such neglect or abuse can be substantially corrected or eliminated so as to allow the child's safe return to his or her parent or parents within a reasonable period of time." The law goes on to specify various ways in which the conditions allowing for termination of parental rights may be met. These include mental illness and mental deficiency, habitual abuse or addiction to alcohol or other drugs, or lack of cooperation, response, or follow through with "appropriate available and reasonable rehabilitative efforts."

A section of the law addresses the termination of the residual rights of parents whose children are already in foster care. It should be pointed out that the majority of children currently in foster care are placed by voluntary entrustment rather than by court order.[7] In two studies court order accounted for only 20%,[8] and 38%[3] of children in foster care. Parental rights of voluntarily placed children may be terminated if, first, the court determines that it is in the child's interest and, second, if the parents "have, without good cause, failed to maintain contact with and to provide or substantially plan for the future of the child for a period of 12 months after the child's placement," or if the parents "have been unwilling or unable . . . to remedy substantially the conditions which led to the child's foster care placement."

The provisions for foster care planning and review should also provide the data or evidence necessary for any action under the new termination of parental rights statute. The courts will be allowed the opportunity to make decisions regarding children more according to the child's emotional realities and needs rather than requiring a threshold finding of parental culpability.

One particular situation might be better addressed by the revised code. This concerns children placed in foster care at birth by unwed mothers. In a New York study of children in foster care, it was found that only 28.6% of such children left foster care in the first year.[9] Unmarried mothers tended to engage in a low level of visiting, and at the end of five years of foster care only one in ten of such mothers engaged in frequent visiting of her child.[10] The new Virginia law allows a 12-months grace period for a biological parent's maintaining contact with or planning for the future of a child in foster placement. One would hope that the mother of such a child could be required to care for it adequately within a period of much less than a year, so that the child could be made available for adoption while still very young.

Permanent Foster Care Placement

This is the last of the major features of this law relating to the problems of continuity of relationship experienced by many children placed in foster care. It appears that the segment of the law dealing with permanent foster care placement is largely for the benefit of children out of infancy, and probably most of all for adolescents. If the biological family cannot care for a child in infancy, adoption surely remains the favored alternative.

There are a number of situations in which permanent foster care placement might serve children well. There are many children in foster care with well-established relationships with their foster parents. For these children, termination of the residual rights of their parents may be a liability, because their foster parents may not be able to adopt them and the children may be placed for adoption elsewhere. In the situation where a child has an important relationship with a biological parent who will not be able to provide adequate care, permanent foster placement can provide for stability for both the child and foster parents while also assuring the continuity of the relationship between the child and biological parents. Were such a child to be adopted, the relationship with the biological parent would be terminated.

Conclusion

The revised juvenile code attempts to safeguard the young child's need for stability and continuity of relationships. First, it limits the conditions under which a child can be precipitously removed from the parental home. Second, in combination with the 1975 child abuse act it requires that comprehensive services be provided by welfare departments before court-ordered foster care can be implemented. For the child in foster placement, welfare departments are required to carry out more careful planning and greater efforts at rehabilitation of the family than has been the case. The conditions for terminating the rights of parents are defined better than was the case previously, facilitating adoption for some children. A new and useful alternative allowing some children greater continuity in their important relationships will be provided by permanent foster care placement. These aspects of the revision of the Virginia juvenile code reflect an increasing concern for the child's welfare and constitute a sensible beginning attempt to attend better to the child's need for adequate parental care.

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A New Law Affects Virginia's Physician Shortage

John G. Larson, PhD, *Richmond, Virginia*

"The changes being implemented present constraints on traditional practices. Careful thought must be given by physicians and hospital executives to the impact of these changes."

PRESS COVERAGE of the recent report by the Carnegie Council, *Progress and Problems in Medical and Dental Education,* emphasized the gross interpretation that the Council has stated that the national shortage of physicians has ended. Careful reading of the report establishes that no such statement was made. The Council did state that there is now considerable disagreement over whether a shortage currently exists. The emphasis of their recommendations rightly has shifted to the geographical maldistribution of physicians and shortage of primary care physicians.

An unprecedented supply of physicians seems probable. The Carnegie Council projects the supply of physicians in 1985 to be 210-218 per 100,000 population; The Bureau of Health Resources Development (DHEW) projects 207-217 per 100,000 population. (This is a significant increase when compared to the current ratio of 174 physicians per 100,000 population, and the latter is not considered by many national observers to be a shortage situation.) Both projections are based on the assumption that the net annual inflow of foreign medical graduates will decline.

An increase in the aggregate supply of physicians is not to be interpreted as an end to the persistent shortage of physicians in many parts of Virginia. Experience has demonstrated that a glut of physicians in a few communities has resulted neither in a significant dimunition of physicians' incomes nor a subsequent overflow into the shortage areas.

While the Carnegie Council's report is a respected and sensitive analysis of physician manpower problems, the recently enacted Health Professions Educational Assistance Act of 1976 (PL 94-484) is a federal initiative which has firmly linked the future of medical education with the health care needs of the American people. In keeping with the national priorities identified in the Council's report, PL 94-484 is designed to produce more primary care practitioners and improve health services in manpower shortage areas. The training and education of physicians is not the only goal; support is provided for veterinary medicine, optometry, pharmacy, podiatry, public health and allied health manpower. The interpretations of PL 94-484 is being released slowly; thus it is difficult now to address all the provisions of the law other than what is founded on the Carnegie Council's report and already translated by DHEW and other insiders. The provisions dealing with physician manpower have been briefly explained by DHEW due to the serious concern by professional organizations and medical schools. Points of interest are foreign medical graduates, financial assistance for medical students, area health education centers and capitation payments to medical schools. These points are reviewed here, for they present both opportunities and problems to Virginians.

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Submitted 1-7-77.

"Many shortage areas in Virginia will have to accelerate their physician recruitment programs, for the competition for American medical graduates will become tougher."

Foreign Medical Graduates

Foreign medical graduates have been for decades a serious source of contention due to the nation's dependency on an inflow of FMGs to satisfy our physician manpower shortage problems. Part of the concern has been with the number of unlicensed FMGs in state institutions, the number considered to be unqualified, and this country's apparent policy of drawing away a valuable resource from disadvantaged countries. Virginia has recently prohibited the employment of unlicensed FMGs in state institutions, thus eliminating one problem and creating another. PL 94-484 represents the concern of the Carnegie Council and professional organizations such as the AAMC by placing tight restrictions on the entry of foreign medical graduates into this country. The new regulation states that FMGs will not be issued visas unless they have passed Parts I and II of the NBME examination and can demonstrate competence in written and oral English. The only exception might be family-related preferential visas, that is, relatives of US citizens. Since the NBME exam is not available outside of the USA, FMGs will not be able to take it for some time to come. However, the ECFMG exam may be revised to serve as a substitute, a prerogative given to the Secretary of HEW. Secondly, foreign physicians may no longer enter the US as exchange visitors (J-visa) unless a) a school of medicine has agreed in writing to provide training; b) the applicant has passed Parts I and II of the NBME, as mentioned; c) the individual is committed to return to his country, and his country has agreed to provide a position upon his return; d) the individual will stay no more than two years unless additional training is requested by his country.[1] There are several waivers which curtail the immediate implementation of these restrictions, but by 1980 the supply of FMGs will be substantially reduced. The impact will be to eliminate many residency programs which have depended on FMGs. Many shortage areas in Virginia which have depended on foreign physicians will have to accelerate and improve their physician recruitment programs, for the competition for American medical graduates will become tougher in many specialties.

Financial Assistance for Medical Students

There are several types of support provided by PL 94-484. One program, strongly supported by the Carnegie Council, is the National Health Service Corps (NHSC) scholarships, which have existed for years. These serve the needs of students and physician-shortage areas by obligating students to practice in them as repayment for the funds; students must practice on a year-for-year basis for a minimum of two years. As in the past, the areas of shortage have been designated by the Secretary of HEW The penalties for noncompliance with the service obligations have been increased to three times the amount of scholarship assistance plus interest at the going rate; the penalty is payable within one year after training has been completed.

Several Virginia communities have enjoyed the services of NHSC physicians in the past, but many of the areas within Virginia which have been designated "critical medical shortage areas" have probably not taken advantage of this opportunity. Appropriations for this program have been increased substantially. The Carnegie Council report states that the number of applicants in the past has exceeded the number of available scholarships, thus a substantial supply is assured. The expectation that NHSC physicians will locate permanently in a shortage area has not always been realized, but the value of these physicians for at least two years cannot be disputed.

Area Health Education Centers

This legislation has granted new authority to contract with schools of medicine to develop area health education center (AHEC) programs. AHECs were first conceived by the Carnegie Commission (now Carnegie Council) report in 1970, *Higher Education and the Nation's Health: Policies for Medical and Dental Education.* It first suggested that 126 AHECs be established throughout the US. One suggested area was the Roanoke region of Virginia; this has been repeated in the Council's latest report. The

"This legislation has granted new authority to contract with schools of medicine to develop area health education centers, which are expected to further decentralize medical education."

AHEC concept is expected to further decentralize medical education and develop clinical training opportunities in community settings. One reason for the current enthusiasm for the AHEC concept is that it can attain the benefits of having a medical school in a geographic area but costs substantially less to develop. Among the potential benefits to the community are improved quality of care, attraction of health manpower to the area, and improved and expanded containing education programs.

Of the existing AHECs, only eleven were developed according to the Carnegie Council's model, which is "a consortium of health care providers and educational institutions with linkage to a central medical or university health science center that provides central coordination and is responsible for developing cooperative educational programs with and among institutions at local levels".[2] Many variations have been developed with the financial support of the now defunct Regional Medical Program and the Veterans Administration. One such example is in the Tidewater region, established by the Eastern Virginia Medical Authority. The financial support authorized by PL 94-484 will be granted only for development of the Carnegie Council's model, which means that the contracting agency must be a medical school/university health science center. The University of North Carolina system has developed excellent examples of the Carnegie Model consortium linked to a university health science center.

The opportunity exists for all parts of Virginia, not just the Roanoke area. Actualization will depend on the interest and initiative of Virginia's medical schools.

Capitation Payments to Medical Schools

Depending on whom you are talking to determines whether "incentive" or "controls" is used to describe the new restrictions placed on capitation supports to medical schools. The federal government's aim is to encourage production of more primary care physicians and to limit the training of specialists, particularly those considered to be in oversupply.

In order to qualify for capitation support in fiscal years (1978-1980, medical schools are required to assure the first-year primary-care residencies (now defined as family practice, general internal medicine and general pediatrics) are filled at specified percentages of all filled first-year positions in all direct or affiliated residency programs. The stipulated percentages are 35% for FY 1978 grants and 40% for FY 1980 grants. It will not be applied on an individual basis to medical schools unless the national average does not meet the stipulated level by July 15 before each fiscal year begins. Medical schools are prohibited from "disaffiliating" any residency programs to make their quota. The incentive as to increase the number of positions in primary care training slots, and either decrease or at least stabilize the number of positions in other specialties. The result will certainly be more primary care physicians, thus enhancing the recruitment possibilities for all communities. On the other hand, for the communities and hospitals experiencing problems in the recruitment of specialists, the competition will become more stringent; it is doubtful that the number of specialists will increase, maybe they will diminish. Many hospitals should consider this seriously in their long-range planning since the major part of their revenue is derived from the practice of specialty medicine. Their long-range potential may be limited by ineffective recruiting techniques or the failure to initiate such programs.

Summary

The changes advocated in the Carnegie Council report and implemented by the Health Professions Educational Assistance Act encompass more than the elements presented in this article. AHECs, NHSC scholarships, increased production of more primary care physicians and restrictions on the flow of FMGs into this country—all present opportunities for improved quality of care and greater access to physicians. Nonetheless, they also present limitations to and constraints on traditional practices. Careful thought by community leaders, physicians and hospital executives must be given to the impact of these changes.

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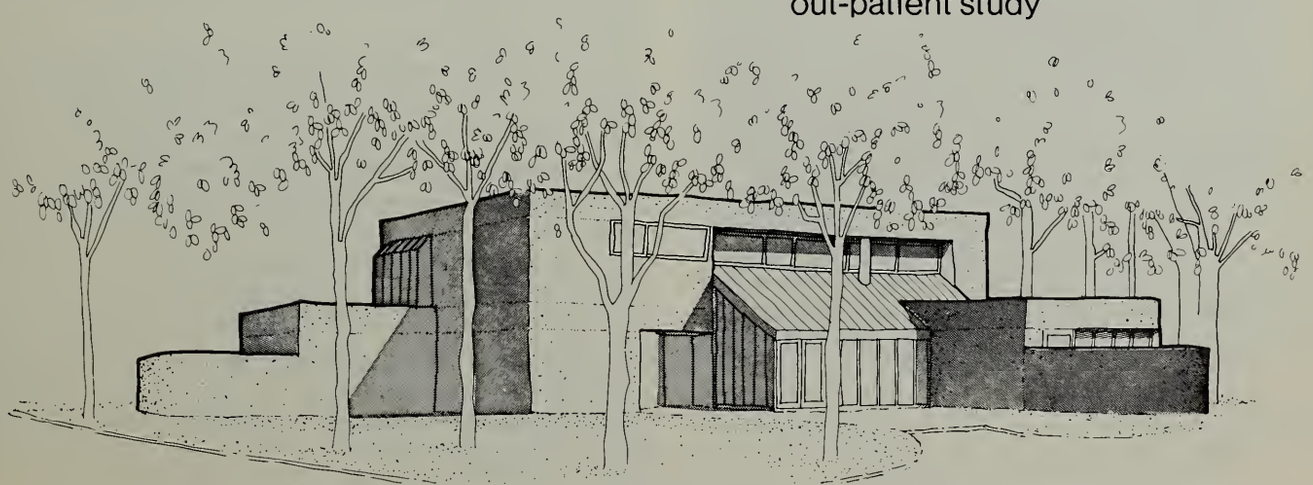
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Actinomycosis and Lumbar Disc Disease

William M. Chadduck, MD, William D. Lewis, MD, and David Roycroft, MD, *Martinsville, Virginia*

A rare case of isolated spinal lesions due to actinomycosis is a reminder of the variety of lesions that may present as a lumbar disc syndrome.

THE PREVALENCE of lumbar disc disease as a cause of sciatica is well recognized by most physicians. Other intraspinal lesions causing disc syndromes have been reported[1,2,3,4], and Coppola[5] has published a noteworthy account of both intraspinal and extraspinal lesions, which must be considered in identifying sciatic pain syndromes. Actinomycosis is known to involve the spinal column and was encountered in a patient being treated for a lumbar disc syndrome. This case is presented to demonstrate another of the variety of lesions to be considered in the differential diagnosis of lumbar disc disease and also to describe the rare occurrence of isolated fungal disease within the spine.

Case Report

KVH, a 61-year-old man, was admitted to Memorial Hospital of Martinsville and Henry County for treatment of back and right leg pain. Three weeks prior to admission, the patient had been lifting some heavy items on his trucking job and had the onset of low back pain with radiation into his legs, chiefly on the right side. He nad noticed no paresthesias or weakness in the legs and had had no bowel or bladder complaints. The patient had had a course of conservative therapy at another hospital but because of persistent pain was admitted for neurosurgical evaluation. His past medical history was unremarkable. In earlier years the patient had worked on a dairy farm and continued to tend a few cows on his small farm. He had never had any illnesses to suggest cervical-facial actinomycosis, or "lumpy jaw syndrome."

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Submitted 10-12-76.

Examination showed the patient to have some tenderness and limitation of motion in the back, and straight leg raising bilaterally produced sciatic pain. The right Achilles reflex was absent; the left, quite brisk. Rectal exam showed tenderness over the right sciatic notch. Sensory testing was normal, as was the remainder of the physical examination.

Radiographs of the lumbar spine showed hypertrophic arthritic changes in the lower lumbar region with prominent spur formation anteriorly at L5 and S1, and laterally, bilaterally, at L3, L4, L5, and S1. The chest x-ray was normal.

Laboratory data were all normal with the exception of an elevated cerebro-spinal fluid protein of 174 mg% and an elevated alkaline phosphatase of 248 units (normal:14-56). A lumbar myelogram (Figure 1) showed a large anterior filling defect at L4/5 completely separating the dye column, with compression more prominent on the right side. There was additional constriction of the dye column in an irregular pattern at L5/S1.

At the time of operation there was definite herniation of the L4/5 disc, with very soft, rather friable-appearing disc material removed. At the L5/S1 level, the posterior aspect of the dura was encased in a thick granulomatous material, which on pathologic exam showed chronic inflammatory tissue. Yellow fluid exuded from this level of the epidural space. The granulomatous tissue was dissected free of the dura overlying the cauda equina and the S1 nerve root. The final pathologic examination showed a mycelial fungus morphologically consistent with actinomyces (Figure 2). The organism was negative on an acid-fast stain, excluding the alternate possibility of nocardial infection, which is known to be acid-fast.



Fig. 1. Antero-posterior view of the lumbar myelogram shows a large defect (needle artifact may contribute to defect) at L4/5 with a ragged appearance of the dye column at several levels. The S-1 nerve root on the right is especially abnormal.

Because of a penicillin allergy, the patient was treated with large doses of tetracycline and made gradual and progressive improvement. X-rays of the lumbar spine made one year after surgery showed some increase in the hypertrophic changes but no evidence of bone destruction. Alkaline phosphatase activity had returned to normal. The patient was later admitted to the internal medicine service because of diarrhea and weight loss, whereupon a thorough gastrointestinal evaluation and repeat chest x-ray were completely normal. It was felt that the patient's diarrhea was due to antimicrobial therapy; it did indeed subsequently cease. After two years of followup the patient has shown no recurrence of symptoms or progression of his disease.

Discussion

Seen occasionally in Virginia, actinomycotic infections most frequently involve the cervico-facial areas by spread of infection from a diseased tooth or even a tonsillar infection. The "lumpy jaw syndrome" describes this form of the infection. Pulmonary actinomycosis is also seen, with physical signs resembling those of pulmonary tuberculosis, and radiographs may show massive consolidations bilaterally, usually in the lower lung fields. Abdominal actinomycosis is thought to occur by spread to the intestinal mucosa of organisms in the saliva. Widespread extension of the disease to the liver and vertebral bodies has been noted, primarily with the abdominal form. Lamartine de Assis and Mignone[6] reported a case of spinal actinomycosis with spinal cord compression in a 52-year-old male, who at necropsy had extensive thickening of the dura with inflammatory exudate such as seen in the present case. However, their patient also had cutaneous lesions.

It is interesting to note that our patient, on careful retrospective history-taking, had no episodes to suggest cervico-facial actinomycosis, and chest x-ray was perfectly normal. At one time, following treatment with antibiotics, abdominal symptoms were thought related to the presence of active actinomycosis, but localized findings never occurred and the stool cultures did not produce the organism. *Actinomycosis israeli* is the organism most likely to produce systemic infections. One weakness of this report is the absence

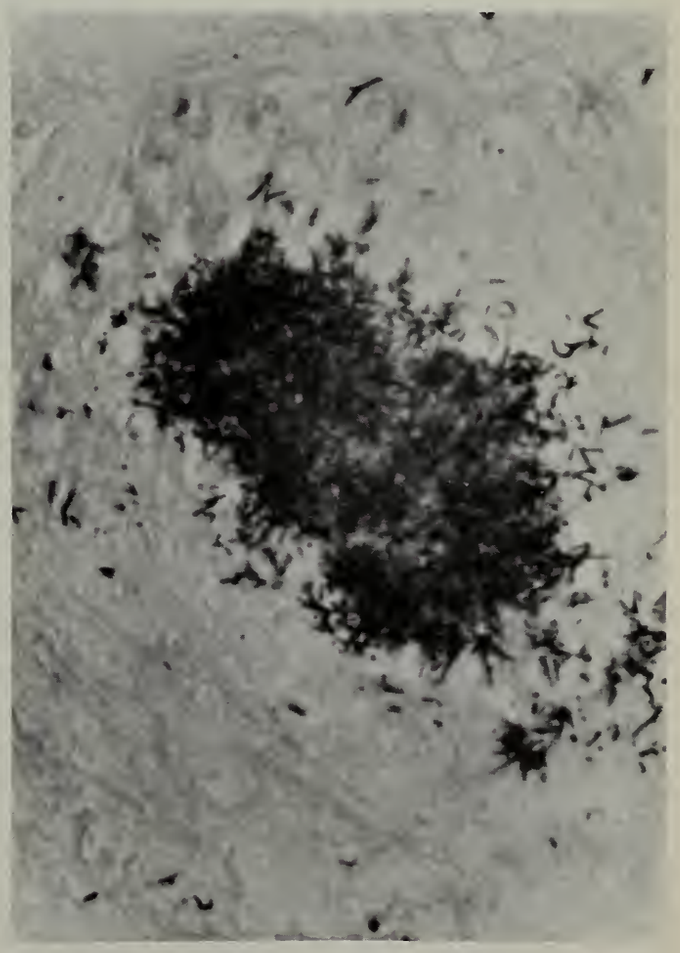


Fig. 2. Photomicrograph of material from the L4/5 intervertebral space. The colonies of organisms are seen on a background of typical disc material.

of cultures for the fungus; as has been the experience of others in recent decades, however, the diagnosis was not suspected at the time proper material for culture could have been obtained.

Historically the patient became symptomatic after a major stress to the lumbar spine. It is quite likely, however, that the disease process was present in the lumbar spine and disc spaces, predisposing them to the stress factors. Some chronic involvement of the lumbar epidural space at the level below the disc rupture was obvious at the time of surgery.

Summary

The occurrence of isolated spinal lesions due to actinomycosis is rare. Nonetheless, its presence in this case acts as another reminder of the variety of lesions that may present as a lumbar disc syndrome.

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Isolated Nodular Pulmonary Amyloidosis

P. M. Fitzer, MD, *Newport News, Virginia*

A case of isolated pulmonary amyloidosis not associated with plasma cell dyscrasia is presented. Pleural effusion was demonstrated radiographically. Associated vasculitis was a postmortem finding.

ISOLATED pulmonary amyloidosis is a rare lesion. The report describes a case of isolated pulmonary amyloidosis with several unusual radiographic features: free pleural effusion, and clearing of parenchymal nodular lesions following corticosteroid therapy.

Case Report

A 72-year-old woman was admitted with chills, fever and pleuritic chest pain. Two months before admission she noted the onset of malaise, chills, fever, and cough productive of nonpurulent sputum. These symptoms subsided after several weeks, only to recur shortly before admission. Bilateral pleuritic chest pain was now present, and a 20-pound weight loss was noted. Her past history included thyroidectomy and hysterectomy for benign disease more than 25 years previously; appendectomy had been performed four years before admission. She had smoked a pack of cigarettes daily for many years. Physical examination revealed temperature 100.4, pulse 80, blood pressure 140/40. There was a thyroidectomy scar. There was dullness to percussion most marked over the right hemithorax. Rales were heard above the dull areas. The heart was enlarged, with regular rhythm, A2 louder than P2. There was a grade I systolic ejection murmur at the base and along the left sternal border. There was a right lower quadrant scar. The physical exam was otherwise unremarkable. Chest radiographs showed a right pleural effusion, and bilateral nodular pulmonary densities (Fig. 1). Laboratory studies included a normal urinalysis. The white blood count was 11,000 with many immature forms. SMA 14 was normal. Cultures of blood and urine were normal. Serological studies for antinuclear antibodies, rheumatoid factor, and fungi were normal. Right thoracentesis showed straw-colored fluid with the characteristics of an effusion; culture of the effusion was negative. Bronchoscopy revealed purulent material from the right lower lobe; but multiple cultures, including fungus and AFB, were negative. Because of lack of response to multiple antibiotics, open lung biopsy was carried out on the right. The lung was studded with multiple nodules, up to 1 cm in diameter, many sub-pleural. The visceral pleura was adherent to the parietal pleura posteriorly. Multiple biopsies were obtained. There was an irregular nodular amorphous deposition of eosiniphilic material identified as amyloid by its affinity for the Congo red stain and its characteristic apple green birefringence on Congo red stain under polarizing microscopy (Fig. 2). Sev-

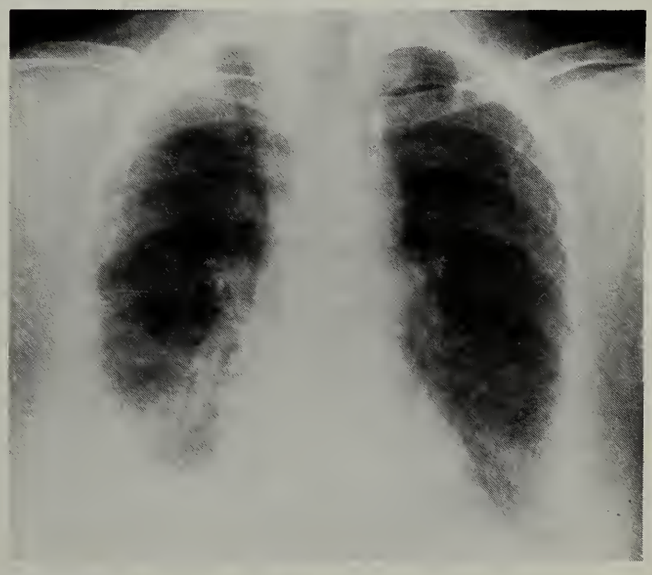


Fig. 1. Frontal chest radiograph shows pleural density at right base and bilateral small pulmonary nodular densities.

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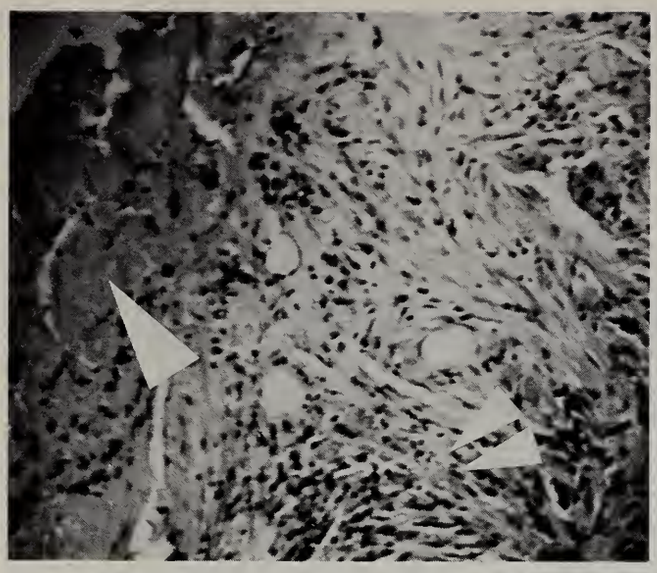


Fig. 2. Photomicrograph of lung, H&E stain, ×40. Note amorphous amyloid deposited in somewhat nodular pattern (single arrow). Adjacent granulomatous fibrosis obliterates normal pulmonary parenchyma (double arrow).

eral of the nodules were sub-pleural. The margin of the nodules showed amyloid deposition around blood vessels, focal giant cell reaction, and an organizing pneumonia felt to be secondary, probably a reflection of distal airway obstruction and alveolar stasis. The slides were also reviewed at the Armed Forces Institute of Pathology. The final pathologic diagnosis was nodular pulmonary amyloidosis. Because of this diagnosis, it was felt that plasma cell dyscrasia and systemic amyloidosis should be excluded. Bone marrow aspiration revealed only erythroid hyperplasia. Serum protein electrophoresis was normal, and no Bence-Jones protein was noted in the urine. Serum protein immunoelectrophoresis revealed elevation of IgG (1580, normal 853-1463), IgM (280, normal 72-126), and IgA (466, normal 139-261). Gingival and rectal biopsies were negative for amyloid; liver and spleen scans were normal. The patient was discharged on prednisone 30 mg every other day, with marked symptomatic relief. Three months later, the bilateral pulmonary nodules had markedly cleared.

Postmortem.

The patient died 18 months after the open lung biopsy. Her course was marked by anorexia, generalized muscle wasting, congestive heart failure, anemia, arthritis, and leukocytosis. At autopsy a generalized granulomatous vasculitis involving small- and medium-sized arteries was found affecting all organs, including skeletal muscle and heart. The vasculitis was characterized by a mixed infiltrate of polymorphonuclear leukocytes, lymphocytes, histiocytes, plasma cells, and frequent multinucleated giant cells. The lungs were only minimally involved, and, in the area of the previous lung biopsy, only a single isolated pleural amyloid nodule was found. Amyloid depositis were not found elsewhere in the lung, nor in any other organ. There was no sign of a glomerulitis, but the kidneys were otherwise severely involved. The heart was also severely involved. Chronic active hepatitis was present, along with chronic fibrosing pancreatitis. Bone marrow sections showed marked hypercellularity with a predominance of myelocytes, but there was no other evidence to suggest evolution to leukemia to explain the peripheral leukocytosis. In summary, the patient had generalized vasculitis associated with isolated nodular plumonary amyloidosis.

Discussion

Much of the confusion surrounding amyloidosis is due to the many classification systems encountered in the literature. The following system seems to agree best with present clinical data[1]:

Pattern I ("primary type"): Involvement of heart, GI tract, muscle, nerves, skin. Commonly associated with plasma cell dyscrasia.

Pattern II ("secondary type"): Involvement of liver, spleen, kidneys, adrenals. Commonly associated with chronic infections, rheumatoid arthritis, familial Mediterranean fever, Hodgkin's disease.

Mixed Pattern I and II: Involvement of both Pattern I and II sites, apparently an admixture of pathologic processes.

Localized: Involvement exclusively of a single tissue or organ.

The present case clearly fits into the final category.

Pulmonary amyloidosis may be further classified[2,3]:

I. Tracheo-bronchial
   1. Nodular masses trachea-bronchi on planogram and bronchogram
   2. Secondary changes
      a. Atelectasis
      b. Obstructive emphysema
      c. Distal bronchitis, pneumonitis, or bronchiectasis

II. Tumor-forming
   1. Masses—single or multiple, may coalesce
      a. Can cavitate
      b. Can calcify

III. Diffuse Parenchymal
   1. Interstitial changes with possibly pulmonary fibrosis
   2. Pleural involvement—rare
   3. Hilar or mediastinal nodes—rare, may calcify

The present case fits best into category II: multiple pulmonary masses.

About 43 cases of isolated pulmonary amyloidosis have been reported. Several articles have reviewed all cases reported to 1974; several additional cases have been added to the present[2-9]. Although pathologic involvement of the pleural surfaces is apparently not uncommon[5], radiographic evidence of pleural abnormality is most unusual. A single example of free pleural effusion has been presented, but the patient

apparently had a Pattern II disease distribution, not localized to the lung alone[2]. Pleural effusion has been alluded to in the literature[3], but the cited reference does not mention this finding[10]. Mild pleural thickening has been reported[6,11], but a definite free pleural fluid collection as in the present case has not been mentioned in isolated pulmonary amyloidosis.

The origin of the waxy amyloid substance is not clear. In many cases, especially Pattern I disease, the amyloid fibril is of immunoglobulin origin and an auto-immune etiology has been postulated[12]. Isolated pulmonary amyloid has been shown to be of immunoglobulin origin[13]. The source of the amyloid fibril in cases of localized tumor-like nodules may be a contiguous monoclonal plasmacytic infiltrate[9,12]. However, such an infiltrate was not found in the present case, and a polyclonal, not monoclonal, gammopathy was demonstrated.

This case presents another apparently unique feature: clearing of the multiple pulmonary nodules on followup chest radiographs. This could be related to the steroid therapy. Although localized pulmonary amyloidosis may have a rather benign clinical course, the literature does not describe the clearing of pulmonary lesions[5,9,14].

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Three Disorders Occur In Unusual Association

Khalid J. Awan, MD, and Fred S. Booth, MD, *Norton, Virginia*

Myasthenia gravis, pernicious anemia, and thyroid dysfunction are diagnosed simultaneously in a patient. The authors urge wider recognition of this association, noting that all three disorders respond well to treatment.

ASSOCIATION of myasthenia gravis with thyroid disease or pernicious anemia is well known. The occurrence of all three disorders in the same patient, however, is very rarely reported. Singer and Sahay[1] first reported the association of myasthenia gravis, Hashimoto's thyroiditis, and Addisonian pernicious anemia in a 48-year-old English woman and also referred to a patient reported by Simpson in whom Hashimoto's thyroiditis was found at autopsy.

The purpose of this communication is to describe this rare but significant triple association in an 85-year-old white woman.

Case Report

An 85-year-old white woman was referred because of advanced bilateral ptosis of seven to eight months duration. Often she had to raise her eyelids with her fingers in order to see. She complained of weakness of arms and muscles of the mouth. This weakness became apparent early in the day and became so pronounced by late afternoon that she could not raise her arms, close her mouth, chew her food, or open her eyes. It was not unusual for her to use her left hand to support the right arm to carry food to her mouth. Often she had to stop eating in the middle of a meal because the weakness of arms and mouth would not allow her to finish.

Approximately 45 years before (at age 40), she had had thyroid surgery for "extreme weakness and nervousness due to overactive thyroid." The exact details of her thyroid dysfunction or the surgical procedure could not be found at the medical center where surgery was performed. However, the patient told that the surgeon who performed the operation had referred to her thyroid trouble as a "toxic goiter." After the thyroid surgery, she had no major health problems until admitted recently to the hospital with congestive heart failure.

From the Norton Community Hospital. Address Dr. Awan at 100 Fifteenth Street, Norton VA 24273.

Presented at the meeting of the Wise County Medical Society in Wise, Virginia, on October 13, 1976.

The patient then was found to be suffering also from pernicious anemia, the diagnosis of which was confirmed by hemoglobin of 5.1 gm%, compatible bone-marrow studies, presence of circulating antibodies to human intrinsic factor (IF), and favorable response to vitamin B_{12} therapy. Skeletal muscle antibodies were also present in the serum of the patient.

On examination, her face was totally expressionless and her lower jaw was hanging from her open mouth. The severe bilateral ptosis made her appear as if she was half asleep. However, she was remarkably alert mentally and gave a vivid description of her symptoms and past medical history. Her vision was 20/200 in each eye with best correction. She had bilateral moderate cataracts and macular degeneration with pigmentary changes in both maculas. Examination of the extraocular muscles showed bilateral changes suggestive of internuclear ophthalmoplegia (Fig. 1). However, this proved to be pseudointroacular opthalmoplegia only, as it and the ptosis completely disappeared following the intravenous injection of edrophonium (Tensilon) (Fig. 2). This confirmed the

diagnosis of myasthenia gravis and patient responded favorably to Prostigmine.

Comment

It appears that the triple association of myasthenia gravis, dysthyroidism, and pernicious anemia has not been fully emphasized in the literature. All three disorders respond well to treatment; their association deserves a wider recognition. For example, if it were not for a high index of suspicion, the anemia in this case could have been attributed simply to malnutrition.

Association of myasthenia gravis with autoimmune disorders, such as systemic lupus erythematosus, dysthyroidism, or pernicious anemia, and the role of thymus in its etiology, point to an autoimmune basis for this disease. Although no thymus pathology was detected on chest x-rays, the presence of skeletal muscle antibodies in this case appears to support this concept.

The association of thyroid disease and myasthenia gravis and, in some cases, improvement of myasthenia gravis following thyroidectomy, is known.[2,3] It cannot be said with certainty that 45 years ago when this patient had thyroidectomy, she also had myasthenia gravis, which then responded to thyroidectomy, and that the symptoms described here were actually a recurrence of the disease. But, if this was indeed so, this patient underwent an extremely long period of remission (45 years) of this disease.

Pseudointernuclear ophthalmoplegia of myasthenia, a phenomenon of unknown mechanism, may be mistaken as a sign of brain stem lesion.[4] This unusual manifestation of myasthenia gravis should have wider recognition in nonophthalmic medical fields.

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Fig. 1. Left, on attempted right gaze, noticeable lack of action of left medial rectus; abducting right eye also had horizontal nystagmus. Right, minimal or no action of right medial rectus on attempted left gaze. Compare both views with Figure 2.



Fig. 2. Left, after intravenous injection of 10 mg of edrophonium chloride (Tensilon), ptosis has disappeared and patient is able to open eyes voluntarily. Center, there is also full rotation of eyes on right gaze and, right, full eye movements on left gaze.

Treating Adolescents in a Therapeutic Community

F. A. Abdou, MD, Steve Huddle, MSW, and Mike Morris, BA,
Norfolk, Virginia

The therapeutic community concept proves a highly effective ally in the treatment of adolescents. The authors describe their experience.

TWO GOALS characterized the Human Resource Institute of Norfolk when it opened its doors in 1972: the treatment of adolescents near their families and home environments, this proximity not previously available, and the organization of a therapeutic community rather than the conventional hospital milieu.

That nearness to family and home is a valuable ally in the treatment of the mentally ill has long been recognized. The concept of the therapeutic community, however, has evolved recently, in conjunction with the development of milieu therapy. Maxwell Jones treated World War II veterans in the 1940's with the community approach, developing many of the ideas that are gaining broad usage today. A four-year study of the therapeutic community was described by Robert Rapoport in 1959, and in 1969 Gene M. Abroms refined and expanded these concepts. Abroms defines milieu therapy as a humanistic, permissive, reality-oriented, democratic, living and learning situation. He seeks these two major results: 1) the disciplining of symptomatic behavior (setting of limits) to control destructiveness, disorganization, acting-out or deviation, dysphoria and dependency; these are "the five D's"; 2) the teaching of neo-psychosocial skills in terms of orientation and assertion, assertion meaning the channeling of aggressive energy without disconfirming those on whom the patient depends for social relatedness. Milieu therapy, then, is a social arrangement within which treatment can be carried out in differing modalities. The patient is placed in a controlled relationship to an entire community, and that community is oriented toward providing growth and producing work, play and affectional experiences for its members. Since the patients have more interaction with each other than with staff members, these peers become the prime treatment dispensers. A therapeutic community is the complete extension of milieu therapy.

We have now treated more than 350 adolescent patients between the ages of 12 and 19 years using the therapeutic community approach. These patients have had a wide range of mental and social problems, excluding only severe retardation and brain damage. (Although the Institute also treats adults, we have found that combining adolescent and adult units is not conducive to effective treatment for either patient population.) There is no doubt, in our experience, but that the therapeutic community, with its opportunities for team work and peer interaction, has been a major factor in the behavioral improvement of our adolescent patients.

Unlike therapy with adults, adolescent therapy places the burden of contact on the therapist, and this

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fits beautifully into the framework of the therapeutic community and milieu therapy. The therapist attempts to understand the emotional message the adolescent patient is trying to convey through his behavior and then reads it back to him. The most important point with adolescents is telling them what they feel, rather than expecting them to tell you, and then responding appropriately to the indicated therapeutic needs.

But the therapeutic community creates additional "therapists" in the patients themselves, in this way. On our adolescent unit the patients have these common denominators: they all live on the unit, they all have some sort of emotional trouble, they are all there for help, they all deserve that help. This mutuality makes them primary therapists for each other. For instance, when a patient is acutely agitated or suicidal, we put him on a "special," which means an hourly arrangement by the patients to be in constant company, watching, talking, asking for staff help when needed. This enhances therapeutic endeavors and is in contrast to the old concept of seclusion of the psychotic patient. The patients who are looked after show deep feelings of gratitude, when they become better, and are entirely willing to return the contribution by providing the same care for others.

In our therapeutic community patients and staff together make the rules and regulations. There are community meetings at least three times weekly and daily team meetings, all to discuss the problems and progress of each patient. Case work, family therapy, group therapy involving both the patients and their parents, group therapy for mothers of patients are also held. Individual therapy is provided whenever applicable. About 30% of the patients are on some psychotropic drug. No ECT is provided. Behavior modification techniques are employed, with emphasis on reinforcement of acceptable behavior, impulse control, creativity and productivity. A daily check list of acceptable behavior and therapeutic-end endeavors is rated by the team staff. The earned points serve as rewards in themselves but there are also more tangible rewards, such as special outings, week-end LOA's, parties, and the like.

There is also a staff of qualified special education teachers; the student-teacher ratio is 8 to 1, allowing for individual attention. This school program is not only remedial but is also directed toward motivating the adolescent toward future educational goals. A daily patient check list, similar to that prepared by the psychiatric staff, is kept by the teachers, with similar rewards.

The bringing of drugs and alcohol into the community has occasionally been a problem. Usually the situation is exposed and the consequences of the behavior determined by the patients themselves, rather than the staff.

Sexual acting-out behavior is discouraged by separate sleeping halls for male and female patients; these are closely supervised. When sexual behavior is a problem, it is discussed and confronted openly.

The incidence of running-away behavior has consistently decreased through the four years of our experience. The closeness and mutual concern of the community itself seem to be significant factors. Also, as staff members have matured in their clinical abilities and as the program has evolved, the patients appear to have felt more secure and accepted.

Conclusion

In conclusion, we feel that the task of a successful therapeutic community is the creation of a healthy environment in which the adolescent patient may be an active participant in his own therapy and the therapy of his peers, rather than a neutral observer. Such a program means that decision-making is a shared process and caring is a mutual responsibility. The program is set up with definite limits but must be permissive, flexible and open to change.

The major value of the therapeutic community is that it utilizes and mobilizes the patient's strengths, rather than focusing on his weaknesses or illness. It is progressive rather than regressive in that it is designed to keep the patient active and involved. The adolescent can learn not only how to cope with his problems but also how to live more effectively and productively.

(Bibliography on request.)

ABSTRACTS

The papers here abstracted are to be presented on February 11 and 12 at the 1978 Virginia Regional Meeting of the American College of Physicians, in association with the annual meeting of the Virginia Society of Internal Medicine, at the Homestead, Hot Springs, Virginia.

Polycythemia Due to Smoking. MUNSEY S. WHEBY, MD, *Charlottesville,* and JASON E. MCCLELLAN, MD, *Newport News.*

A 52-year-old male was seen with right hemiparesis and plethora. He had smoked 2 packs of cigarettes a day for over 30 years. Laboratory studies revealed: hemoglobin 20 g/dl, hematocrit 62%, leukocyte count 7,000/mm^3 and platelet count 190,000/mm^3. Red cell mass determined by measuring plasma volume with ^{131}I was 41 ml/kg. Arterial blood gases on room air were pO_2 91 mm Hg, pCO_2 31 mm Hg and pH 7.43. Oxygen saturation based on these values was 97%. Pulmonary function included FEV-1 of 2.3 L (63%) and an MMEF of 1.2 L/S (39%). IVP, liver and spleen scans were normal. Carboxyhemoglobin level was 14%. The patient was advised to stop smoking and he did. 5 months after stopping, his hematocrit had returned to 49%. 14 months after stopping, a ^{51}Cr RBC mass was 26 ml/kg (normal).

Published studies have documented carboxyhemoglobin as a cause of polycythemia. Stimulation of erythropoiesis results from tissue hypoxia produced by a decreased oxygen-carrying capacity and an increase in oxygen affinity. As illustrated by our patient, arterial oxygen saturation calculated from routine blood gas studies may be misleading. The actual decreased oxygen saturation can be documented by direct measurement or by measurement of carboxyhemoglobin and calculation of arterial oxygen saturation. This should be done in all smokers with an elevated hematocrit.

Invasive Adenocarcinoma in "Benign" Pedunculated Colon Polyps: the Polyp-Cancer Controversy Revisited. DONALD M. SWITZ, MD, and ALVIN M. ZFASS, MD, *Richmond,* and RICHARD F. CARTER, MD, *White Sulphur Springs, West Virginia.*

In three cases of colonscopic polypectomy over the last 18 months, we have discovered invasive adenocarcinoma in the stalks of radiographically and endoscopically benign–appearing small pedunculated polyps. These well-documented observations of the appearance of true invasive malignancy arising in small pedunculated polyps under an apparently benign "cap" of tissue challenges the current teaching about polyp size and malignancy risk.

Based on a literature review, the post-resection treatment of patients found to have invasive adenocarcinoma in polyps removed in toto at colonoscopy should include sleeve resection of the colon with local nodal dissection.

Our observations, plus the present ease of screening for occult colonic neoplasm, lead to the suggestion that the elderly high-risk population be screened and appropriate treatment advised. If the data of Gilbertsen (Gastroenterol 72:1031, 1977) that polyps found by screening have a better Dukes rating are valid, this recommendation could have an important impact on the attack rate of colon cancer, one of our major killers.

Chronic Lymphocytic Leukemia: Prognostic Factors, Survival, and Complications. CHARLES E. HESS, MD, *Charlottesville,* and RICHARD C. BELL, MD, *Lynchburg.*

Records of 91 cases of chronic lymphocytic leukemia (CLL) seen at the University of Virginia Hospital from 1/1/60 to 7/1/72 were reviewed. Throughout this period, antileukemic therapy was initiated only if there was clinical or laboratory evidence of progression of the disease (weight loss, pleural effusion, anemia, thrombocytopenia, progressive enlargement of abdominal or mediastinal nodes, liver, or spleen). Median age at diagnosis was 63 yrs. (range of 40-91 yrs.); 52% were males. 32 (35%) were asymptomatic at the time of diagnosis. Lymphadenopathy (80%) and hepatosplenomegaly (74%) were the most frequent physical findings. 31 (35%) were alive and 60 (65%) were dead at the time of the study. 34 (57%) of the deaths were CLL-related. The median survival from diagnosis of these 34 patients was 4.00 yrs. compared to 4.50 yrs. for the 26 patients who died of causes unrelated to CLL. The calculated actuarial mean survival for the 34 patients who died of CLL-related causes was 7.0 yrs. Complications included 218 documented infections in 74 patients (81%), autoimmune hemolytic anemia in 16 patients (24%), and the development of other neoplasms in 20 pa-

tients (22%). A progressive rise in the peripheral blood lymphocyte count, advanced age at diagnosis, and a fall in the hematocrit below 35%, or the platelet count below 50,000/mm³ on the basis of bone marrow failure were poor prognostic factors.

Transsphenoidal Removal of Pituitary Tumors with Preservation of Pituitary Function. H. St. George Tucker, MD, J. P. Wigand, MD, C. O. Watlington, MD, W. B. Blackard, MD, J. W. Harbison, MD, Paul Pevsner, MD, and D. P. Becker, MD, *Richmond,* and Stephen R. Grubb, MD, *Charleston, West Virginia.*

Pituitary function was evaluated before and after transsphenoidal removal of pituitary tumors in 76 patients. In 28 patients with acromegaly, plasma growth hormone was reduced to below 10 ng/ml in 25 and to below 5 ng/ml in 22. Complications of surgery included loss of some pituitary function in 8 (with only 3 requiring replacement hormones), diabetes insipidus in 9 (1 permanent), and meningitis secondary to CSF leak in 1.

Of 26 women with chromophobe adenoma, 19 of 21 had increased prolactin; in 12, relief of galactorrhea reduced prolactin to normal. 9 women resumed normal menses and 6 became pregnant. Headache was relieved in 15 of 19, visual field defects were corrected in 4 of 9 and improved in 5 of 9. Complications included diabetes insipidus (8 transient, 1 permanent), hypopituitarism (2), hypothyroidism (1).

17 men with chromophobe adenoma had large tumors. Patients showed extrasellar extension (16), visual loss (15), hypopituitarism (8). 4 of 11 had increased prolactin but no galactorrhea; prolactin was lower but still elevated after surgery. Visual fields improved (8) or became normal (2), headache was relieved in 5 of 7. Complications included diabetes insipidus (2 permanent), hypopituitarism (2), meningitis secondary to CSF leak (2).

Plasma ACTH in 3 patients with Nelson syndrome decreased from 2500, 4000, and 5000 pg/ml to 110, 200, and 500 pg/ml. Of 2 patients with Cushing's disease, 1 woman died after a postoperative pulmonary embolism. 1 woman with no evidence of pituitary tumor appears cured by removal of pituitary microadenoma.

The Value of Surgical Restaging in Advanced Testicular Cancer. James J. Stark, MD, *Norfolk,* and Marc R. Garnick, MD, and George P. Canellos, MD, *Boston, Massachusetts.*

12 patients with advanced Stage II and Stage III nonseminomatous testicular cancer were treated with intensive combination chemotherapy: 11 with high-dose vinblastine (0.2 mg/kg/d × 2d q21d), bleomycin (30u I.V. q7d), and cis-platinum (20 mg m²/d × 5d); 1 with vinblastine and bleomycin. Toxicity was severe: 55 out of 66 courses were associated with granulocyte count <500. Nausea, vomiting, and abdominal pain were debilitating in many instances. There were 5 documented episodes of bacteremia but no treatment deaths. 7/12 patients went into complete remission; 5/12 into partial remission. Of 7 CR, 3 had "second-look" surgery: 2 had residual foci of tumor in the retroperitoneum; both were resected. One has since relapsed while on further chemotherapy. Of 5 PR, 4 had surgery: none had malignant tumor; 3 had so-called mature teratoma. None has relapsed on chemotherapy. Therefore, of 7 patients with second look surgery, 2/3 CR had tumor while 4/4 PR were free of active malignancy. The only late relapse has occurred in 1 clinical CR patient who was PR at surgery. No clinical PR who became pathologic CR has relapsed. These results suggest that (1) this treatment is toxic but worthwhile in inducing remission and (2) second-look surgery frequently refutes clinical impression regarding extent of disease. The prognostic significance of these pathologic findings will depend on long-term followup.

Does Indomethacin Have Therapeutic Value in Salt-Wasting Renal Disease? W. F. Falls, Jr., MD, and William K. Stacy, MD, *Richmond.*

Renal prostaglandins may be of importance in modulating urinary sodium excretion and the activity of the renin-aldosterone system. Indomethacin inhibits prostaglandin synthetase activity and therefore could be of therapeutic value in states of renal sodium-wasting associated with excessive prostaglandin activity. 3 patients with documented renal sodium-wasting (1 with Bartter's syndrome and 2 with azotemic salt-losing nephropathy [ASLN]) were given indomethacin in an attempt to improve their clinical status. Prior to therapy each patient displayed postural hypotension unless given a high sodium intake (300-600 mEq/24h). In the Bartter's patient and one with ASLN, abrupt sodium retention (69%, 39%) and weight gain occurred. In these 2 patients the plasma renin activity and urinary aldosterone excretion showed no appreciable fall on the first day of therapy but declined by mean values of 70% and 60% respectively after several days when weight gain had occurred. The creatinine clearance changed little in the Bartter's patient but fell 50% in the ASLN patient. The second patient with ASLN showed no change in response to indomethacin. The observations suggest the following: 1) Excessive prostaglandin activity may be of pathogenetic importance in some cases of Bartter's syndrome and ASLN. 2) Indomethacin may be of therapeutic benefit in these patients but caution must be used in treating ASLN because of possible

reduction in glomerular filtration rate. 3) Prostaglandins are not the sole mediators of volume-depletion related renin stimulation. 4) ASLN may reflect several different pathogenic mechanisms.

Asthma in Patients Age 40 or Older. JOHN L. GUERRANT, MD, *Charlottesville.*

A total of 117 patients age 40 or older with asthma have been studied. There were 46 males and 71 females. In 57 asthma started before age 40. In 19 asthma began after age 60. Duration of asthma varied from less than one year to over 60 years. Duration of followup at UVa clinics varied from one visit to 43 years. 36 patients were followed for more than 10 years and 5 for more than 30 years.

As a cause of the asthma, atopic allergy was important in 16, respiratory infection in 63, and emotional factors in 63. As special diagnostic studies, response to a bronchodilator, CO diffusion capacity, sputum eosinophilia, blood eosinophila were useful but not definitive tests. There were 96 associated respiratory diseases and 129 nonrespiratory diseases associated in the 117 asthmatics. 22 had episode of respiratory failure. All patients had symptomatic treatment and antibiotics were used for infectious episodes. Allergy injections seemed to help 9 patients. Corticosteroids were used in 108. Serious steroid complications were unusual. Inhaled beclomethasone was used in 95 and was usually effective.

At the time of the last visit 79 patients were almost well, 29 had annoying asthma, and 9 were disabled. 2 patients had developed Cor pulmonale. The age of onset, duration of asthma, presence of allergy, presence of infection, presence of anxiety, cigarette smoking, associated respiratory disease, other associated diseases did not seem to influence prognosis. An episode of respiratory failure indicated a poor prognosis.

Mechanisms of Atrioventricular Conduction in W-P-W Syndrome. JACOB P. NEATHAWK, MD, *Richmond.*

We report the case of a patient with Wolff-Parkinson-White syndrome who demonstrated two types of atrioventricular conduction during two different episodes of supraventricular arrhythmia. Holter monitoring identified an arrhythmia responsible for the patient's palpitations. On a later occasion continuous ECG monitoring was done while antiarrhythmic drugs were given intravenously. Episodes of regular tachycardia at rates up to 250/min. with narrow (0.07 sec.) QRS complexes were documented by Holter monitoring. The more recent ECG recording showed atrial fibrillation with wide (0.14 sec.), bizarre QRS complexes at a ventricular rate of 200-300/min. At that time the patient received 100 mg lidocaine IV which slowed the ventricular rate to 125/min. Administration of 1000 mg procaine amide then produced narrowing of the QRS complex to 0.09 sec. Sinus rhythm was restored with DC countershock.

This patient demonstrates that tachyarrhythmias associated with the W-P-W syndrome may be of two types—either reentrant through the AV node or occurring through the accessory conduction pathways. Both mechanisms appear to have been active in this patient at different times. Therapy of the accessory pathway type arrhythmias should be directed toward selectively prolonging conduction time in those tissues. By slowing the ventricular rate and normalizing the QRS width, lidocaine and procaine amide are shown to impair accessory pathway conduction and predispose to AV nodal conduction.

Explosion and Colon Laceration During Sigmoidoscopy. J. MILTON MILLER, MD, *Salem.*

On routine sigmoidoscopy, a 68-year-old male was found to have a small bleeding polyp. This was removed by a snare and bleeding followed. As the bleeding did not respond to pressure application, an electrocautery was performed. An explosion ensued, and the patient sustained a colon laceration.

Clinical Estimation of Liver Size: Comparison of Techniques. A. SIDNEY BARRITT, MD, and GIFFORD E. AMMERMAN, MD, *Salem.*

Determination of liver size is an important part of physical diagnosis but exact assessment may be difficult. This study compares the palpation, hard and light percussion, and scratch techniques, using radioisotope scintiscans as a standard of reference. Differences between clinical and scan values ranged from 0 to 9.0 cm. The size of livers examined ranged from 9 to 22 cm. The lower border of the liver was not always palpable but estimated size was closest to scan size when the lower border was palpable. Even so, clinical estimates came within 2 cm of scan size only 60% of the time. When palpation was not possible, use of percussion or the scratch test was less accurate. Light percussion allowed an estimation within 2 cm of reference in half the cases; heavy percussion and the scratch test allowed similar accuracy in approximately one third the cases. The clinical error in all cases but one was that of underestimation.

The data gathered to the present (40 patients) suggest that clinical estimation of liver size is frequently an inaccurate determination. Any study using clinical liver size as a diagnostic or therapeutic index must be viewed with a jaundiced eye.

Exercise Testing in Children. WILLIAM W. MILLER, MD, and CAROLYN M. MCCUE, MD, *Richmond.*

Childhood exercise testing is evaluated by analyzing the characteristics and consequences of 100 consecutive tests performed in children and adolescents referred to a pediatric cardiovascular center. The diagnostic conditions were unoperated congenital and acquired heart disease (41), postoperative heart diseases (36), and miscellaneous conditions (23). There were 63 males and 37 females, 4 to 21 (mean 9.8) years of age. Before study 53 children were restricted from participating in organized exercise and only 3 children were involved in organized athletics.

Bruce treadmill tests were normal in 42 children. The other 58 abnormalities consisted of subnormal endurance (31), exercise dysrrhythmia (13), ischemic ST segment depression (11), subnormal blood pressure (12), elevated blood pressure (7), and inappropriate tachycardia for workload (7).

The consequences of these tests were clearance for school physical education or athletics (59), need for more exercise (18), need for exercise restriction (30), need for additional cardiovascular study (15), need for more cardiovascular treatment (6), and demonstration of effective drug control (4).

Adolescent Blood Pressure: Screening and Three-Year Followup of High School Students in Richmond, Virginia. CAROLYN M. MCCUE, MD, WILLIAM W. MILLER, MD, H. PAGE MAUCK, MD, and LOUISE W. ROBERTSON, MD, *Richmond,* and JON B. TINGELSTAD, MD, *Greenville, North Carolina.*

Blood pressure (BP) was measured periodically in a sample population of 3166 adolescents in public and private high schools in Richmond, Virginia. The public school population (2594) was 74% black and 60% female. The private school population (576) was 1.7% black and 45% female. Ages ranged from 14 to 18 years.

Initial BP was measured by an Arteriosonde 1216 Doppler instrument. In all students with BP over 140/90 mm Hg, it was repeated using a mercury manometer. Initially, a BP >140/90 was found in 9.5%. One year later after multiple mercury manometer measurements only 1.4% had BP >140/90. The mean systolic BP was 115.4 and the mean diastolic 73.1 mm Hg. In 9th and 10th grade students there were no statistical differences in school, race, sex, or age. In 12th graders there was no difference in school or age, but a slightly lower blood pressure in females. At all ages there was a strong correlation between BP and obesity in both races and sexes.

BP above the 90th percentile (135/88 mm Hg) was measured repeatedly in 340 (10.7%) of the students. Persistent elevations were found in 76 (2.4%) and labile elevations were found in 264 (8.3%). Students with persistent BP > the 95th percentile (141/93) were referred for special studies.

Physicians have a responsibility to take a BP on all children over two years of age and to follow changes with growth on percentile curves.

Hemolysis with Aortic Ball-Valve Prostheses. Acute and Chronic Effects of Propranolol. WILLIAM E. STEINKE, MD, and ZUBAIR UL HASSAN, MD, *Richmond,* and ROLANDO A. MENDOZA, MD, *Vero Beach, Florida.*

Sixteen patients with ball-valve aortic prostheses were studied to determine whether the negative chronotropic and inotropic effects of propranolol would reduce turbulence enough to decrease hemolysis significantly. 6 patients, all with cloth-covered valves, demonstrated significant hemolytic anemia. The remaining 10 patients, only 1 of whom had a cloth-covered prosthesis, showed milder hemolysis.

The valve patients showed a 15% increase of LDH (normal <110) following treadmill exercise to 75% of maximum heart rate. Propranolol (average 200 mg/day) sufficient to decrease resting heart rate to 55/min was given for 1 week and the same duration of exercise was repeated. The propranolol significantly reduced serum LDH both at rest and with exercise in the anemic patients but had no effect in the nonanemic patients.

Valve patients were continued on propranolol for 1 month and baseline studies were repeated. Again a significant reduction of hemolysis, seen only in the anemic patients, was demonstrated by changes of hematocrit (31.5 − 35.2), reticulocyte count (7.5% − 2.6%) and LDH (405-344).

Propranolol significantly reduced hemolysis (acutely and chronically) in prosthetic valve patients with hemolytic anemia.

Use of Aminoglycoside Antibiotics: Dosage Nomograms and Pharmacokinetics. DANIEL A. SPYKER, MD, and RICHARD L. GUERRANT, MD, *Charlottesville.*

A simple, graphic method was developed for determining appropriate loading and maintenance doses of the aminoglycoside antibiotics: gentamicin, tobramycin, amikacin, and kanamycin.

The loading dose is determined by the desired peak serum concentration and fraction of body weight (usually assumed extracellular water) in which the drug is distributed for that particular patient. This volume of distribution is estimated as 26% of "ideal"

or lean body weight (LBW). We have devised a nomogram for finding LBW from age, sex, and height. We have found volume of distribution and hence loading dose to be more accurately predicted from LBW than from measured weight. The maintenance dose is chosen simply to replace the fraction of the loading dose lost during the dosing interval. Drug half-life and hence maintenance dose is determined by the ratio of creatinine clearance to LBW which we define as the corrected creatinine clearance ($CorC_{cr}$). A second nomogram estimates $CorC_{cr}$ from the patient's age, sex, and serum creatinine. The dosage nomogram (1 for gentamicin or tobramycin and 1 for kanamycin or amikacin) then provides loading dose from LBW. Maintenance dose and appropriate dosing interval (8,12 or 24 hrs) are then determined from $CorC_{cr}$ and loading dose.

This approach eliminates the need for arithmetic calculations and contributes to physician education. These nomograms are patient-specific and become a part of the patient's permanent record, depicting the calculations used. Our experience using this approach to administration of aminoglycoside antibiotics will be presented.

Effective Exercise Conditioning of Propranolol and Non-Propranolol Treated Cardiac Patients Trained at Low Heart Rates. George W. Vetrovec, MD, and Peter M. Abel, MD, *Richmond.*

The efficacy of exercise conditioning (EC) was analyzed in cardiac patients (pts) trained at heart rates (HRs) less than the 70-85% age–predicted maximal heart rate (MHR) range considered most efficient for exercise training. All pts underwent an initial graded treadmill exercise test (TET) prior to entering a 12 week, 36 session interval training cardiac exercise program during which mean exercise training HRs were recorded. Changes in work performance following the program were assessed by comparing total minutes of exercise time to the highest comparable HR on pre- and post-TETs. The results of 30 pts including 10 pts on propranolol (P) at a dosage of 40-160 mg/d were analyzed. The mean training HR expressed as a % of MHR was 61% for the overall group (range 45-69%), 63% for non-propranolol (NP) and 57% for P pts. Improved exercise performance was observed in 28 of 30 pts including a 1.7 min increase in exercise time (5.7 to 7.4 min pre- and post-TET time) representing a 29% ($p \leq 0.01$) improvement in NP pts and a 2.2 min increase (6.3 to 8.5 min) representing a 35% ($p \leq 0.05$) improvement in P pts. In summary, significant improvement in exercise performance occurs at training HRs < 70% MHR in P and NP treated patients undergoing a cardiac exercise program, demonstrating that pts on Propranolol or pts unable to be trained at higher HRs can benefit from an exercise training program.

Prophylactic Use of Intra-Aortic Balloon Pump in Aorto-Coronary Bypass for Patients with Left Main Coronary Artery Disease. Carl W. Hartman, MD, H. R. Rajai, MD, B. J. Innes, MD, A. G. Bartel, MD, R. D. Brickman, MD, C. Crisler, MD, G.L.B. Grinnan, MD, *Norfolk.*

Aortocoronary bypass (ABP) surgery in patients (pts) with left main coronary artery disease (LMCD) is reported to have an operative mortality (OM) of between 1.4% and 39%. It is generally accepted that the OM in this group of pts is considerably less than that in routine ABP candidates, presumably due to the large amount of myocardium threatened by a single lesion. In an effort to preserve threatened left ventricular myocardium, intra-aortic balloon pumping (IABP) was instituted prophylactically prior to stermotomy in 25 consecutive pts with LMCD (luminal narrowing >50%). 60% of these pts had New York Heart Association Class IV angina, 25% had Class III, and 15% Class II. 50% of the pts in this group presented with unstable angina. Operative pts requiring left ventricular aneurysmectomy, and/or valve replacement, were excluded. Cineangiography of the femoral iliac systems during cardiac catheterization was done routinely to evaluate candidacy for femoral institution of IABP in each pt. No operative deaths have been encountered in 25 consecutive pts managed in this manner. One pt displayed signs of myocardial infarction in the postoperative period. Correctable peripheral vascular ischemic complications of pump insertion were encountered in 3 pts.

Preliminary reports from this ongoing study support the hypothesis that prophylactic IABP is a low-risk procedure that should be utilized routinely in ABP surgery for LMCD.

Evaluation of Patients as Candidates for Ventricular Aneurysmectomy. St. George T. Lee, Jr., MD, Ivan K. Crosby, MD, Lawrence R. Burwell, MD, and Harry Wellons, MD, *Charlottesville,* and Maury C. Newton, Jr., MD, *Marietta, Georgia.*

Forty consecutive pts undergoing left ventricular aneurysmectomy (LVA) were evaluated for surgical risk predictors, and were then followed after surgery. Risk predictors evaluated included age, time since last MI, NYHA Class, principal indication for surgery, HR, BP, LVEDP, LV A wave size, number of coronary systems with >70% stenoses, number of CABG's, location of aneurysm, and ejection fraction of the nonaneurysmal or "contractile segment"

OFFICERS OF VIRGINIA SPECIALTY SOCIETIES

These three entries were inadvertently omitted from the list of specialty society officers published in the October issue. The Editors very much regret the omissions.

Virginia **Allergy** Society
President: F. Stanford Massie, MD, 5855 Bremo Road, Richmond VA 23226
Secretary: John B. Catlett, MD, 7702 Parham Road, Richmond VA 23229

Virginia **Gastroenterological** Society
President: Edward C. Wilson, MD, University of Virginia Hospital, Charlottesville VA 22903
Secretary: J. W. Longacher, MD, 7702 Parham Road, Richmond VA 23229

Virginia **Occupational** Medical Association
President: William T. Wilkins, MD, 1407 Cummings Drive, Richmond VA 23220
Secretary-Treasurer: Capt. Samuel A. Power, USN, Dispensary, Norfolk Naval Shipyard, Portsmouth

(CSEF). There was 100% followup. There were 4 perioperative deaths and 2 late deaths (at 5 and 7 mos). Operative mortality was 3.4% (1/29) in pts with CSEF ≥ 45% and 37.5% (3/8) in pts with CSEF <45% ($\chi^2 = 4.42$, $p < .05$). None of the other factors evaluated significantly affected mortality independent of CSEF, although there was a definite tendency toward lower mortality with fewer coronary systems involved. Survivors had an average followup of 22 mos (range 2-45) with an average improvement in symptoms of 1.6 NYHA Class (from 3.3 to 1.7). 44% have returned to their previous occupations. Conclusions: 1) The CSEF is of prime importance in evaluating risk for LVA. 2) For pts with CSEF >45%, LVA is a low risk procedure. 3) LVA results in continued relief of symptoms in most pts. 4) In pts with previous MI's and subsequent symptoms, LV aneurysm should be considered as a possible contributory, correctable entity.

Microscopic Differential Diagnosis of Genital Infections in Women. MICHAEL F. REIN, MD, JOHN SEDOR, and KELLER VAN SLYKE, MD, *Charlottesville;* W. NEAL ROBERTS, MD, *Durham, North Carolina;* and STANLEY GETZ, MD, *Portsmouth.*

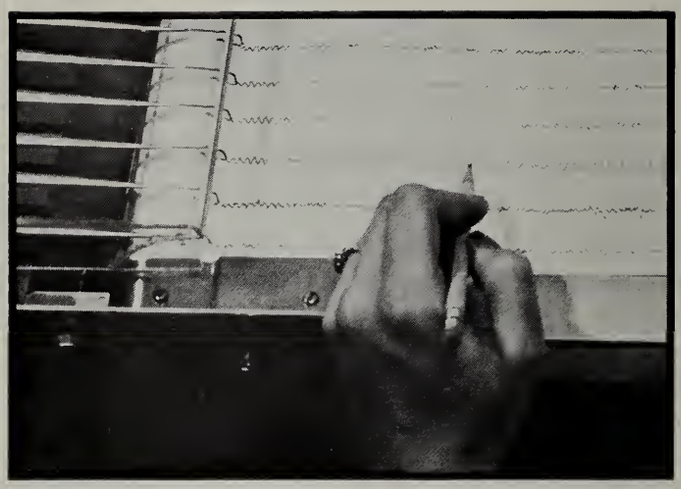
We compared microscopic examination by wet mount (WM), Gram (GrS), and Giemsa (GiS) stains to culture of vaginal discharge from 200 VD Clinic women.

Sensitivity/specificity for the diagnosis of trichomoniasis were: wet mount 63%/97%: Giemsa stain 48%/80%; Gram stain 0%/100%. For diagnosis of *C vaginale* vaginitis: wet mount 31%/72%; Gram stain 36%/81%. For diagnosis of candidiasis: wet mount 48%/84%.

WM was more sensitive than GrS for "clue cells". (epithelial cells studded with coccobacilli) ($p<.02$). Prevalence of clue cells in various groups was: nonspecific vaginitis (signs or symptoms of vaginitis, negative cultures) 21/45 (47%); VD clinic, no vaginitis, 4/25 (16%); trichomoniasis, 14/56 (25%); and Student Health, no vaginitis 5/150 (3%). Patients whose WM showed 1 or more white blood cells per epithelial cell had active vaginitis ($p<.0005$) or cervicitis. Those with vaginitis also showed an increase in the percentage of immature epithelial cells ($p<.001$) but did not show a replacement of the normal Gram-positive flora with other organisms ($p>.5$). Frothy discharge occurred in both trichomoniasis and *C vaginale* vaginitis, which could be reliably differentiated only by microscopic examination. Cervical GmS diagnosed gonorrhea with a sensitivity of 18/32 (56%) and a specificity of 146/150 (97%).

We conclude that microscopic techniques can offer significant diagnostic aid. They tend to be specific but insensitive: positive results indicate infection but negative results do not rule it out. Nonspecific vaginitis is associated with clue cells and seems to be sexually transmitted but does not correlate with isolation of *C vaginale*. ■







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BOOKS

Doctor, Is My End in Sight? by DOUGLAS D. VANCE, MD. 80 pp, with illustrations. New York City, Vantage Press, Inc., 1977, $5.95.



Doug Vance was graduated from the University of Virginia School of Medicine in 1928 and returned to his native Bristol, Tennessee, where he has engaged in family practice and industrial medicine ever since. He has been a sympathetic observer of the passing scene and has had a keen ear for the spoken voice for the past half century. Unlike most of us, he had the happy faculty of jotting down immediately in his prescription book every anecdote or folk-saying that otherwise might have been lost to memory in his daily rounds.

The odd title for this book occurred to him when he recalled a prim but apprehensive professor in the local college who sought relief from painful hemorrhoids. Fearing the worst, she phrased her question, "Doctor, is my end in sight?" The truthful physician replied that, in fact, her end had been in sight for at least ten minutes, but there was no sign of cancer. The author takes off on this high note and continues to report the humorous and the unexpected he has encountered in Bristol and the nearby mountains of Tennessee and Virginia.

The language of the Appalachian people was not always grammatical, but they were never at a loss for an expressive word or a picturesque phrase. In one employment form that requested a list of previous operations, Doctor Vance found nine spellings, all wrong, all dealing with appendicitis. One of his patients with early manifestations of Parkinson's disease said, "Sometimes my fingers are so nervous when I go to pick up a fork to eat, I have to hem up the food to ketch it." A woman of deep religious beliefs summarized her feelings by remarking, "Heaven is my home, but I ain't homesick." One menopausal patient had great belief in the value of "them harmonica shots".

The practice of medicine in some of the outlying coves carried unexpected hazards. Doctor Doug found the aroma of a skunk intensifying as he approached the two-room cabin of a mountaineer. The patient had prepared a poultice by killing a polecat, scraping off all the fat, melting it down, and then smearing the concoction over his chest before sitting in front of a hot "pot belly" stove. Doctor Vance has often wondered how efficacious this therapy was, for understandably he had no followup notes.

The good doctor coined some expressions of his own, for he noted that one of his lady patients "was too young for Medicare but too old for men to care". We are fortunate to have had a physician record the oddities and vagaries of the mountain people before the arrival of hard surface roads, TV antennae, and the ubiquitous community college, for this chapter of Appalachia is doubtless becoming a thing of the past.

Doctor Vance was fortunate in his choice of an artist. Miss Cindy Humphrey of Fuqua Varina, North Carolina, was 17 when she supplemented the text with illustrations reminiscent of the best in Abby Rockefeller's Williamsburg collection.

It is a most readable book.

H. J. WARTHEN, MD

Health Information for International Travel has come off the presses. It is typically detailed, mapped, and indexed to the extent of 96 (small-sized) pages within a soft cover. Write to the Center for Disease Control, Bureau of Epidemiology, Quarantine Division, Atlanta GA 30333, and ask for HEW Publication No. (CDC) 77-8280.

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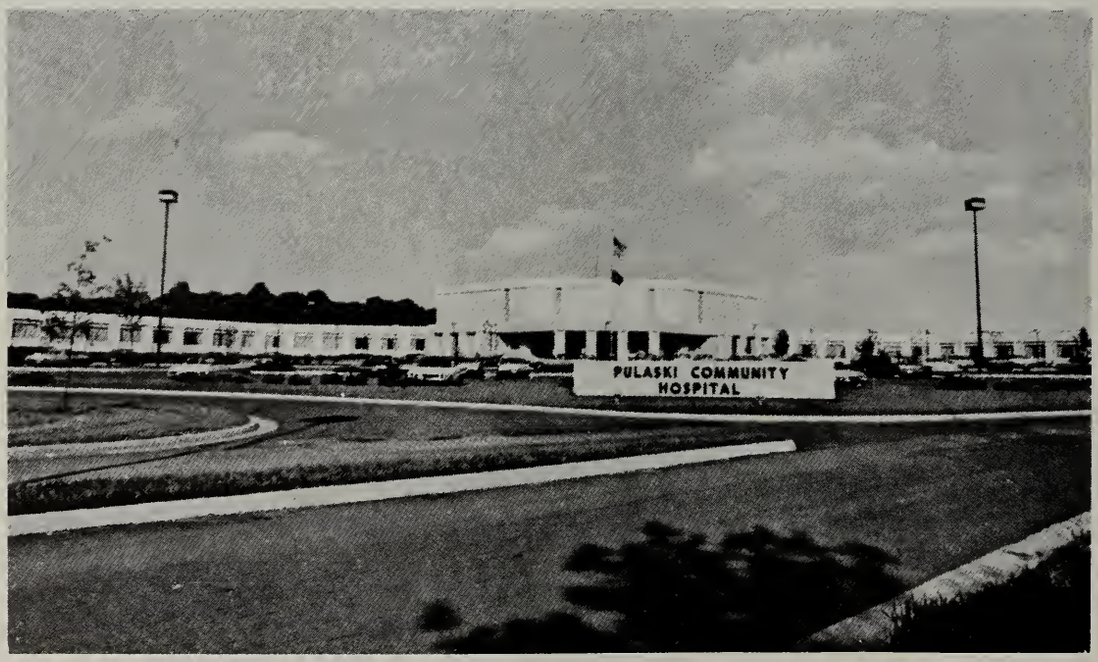
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How Many Hospital Beds Does Virginia Need?

Robin E. MacStravic, PhD, *Richmond, Virginia*

The number of hospital beds in Virginia's communities is now determined by the state. The author explores the method used for this determination and its meaning for Virginians.

SINCE THE PASSAGE of Virginia's Certificate of Public Need Legislation in 1973, the question of how many hospital beds are needed in various areas of the state has been subject to governmental determination. All the citizens of Virginia are affected by such decisions, and so the method used to determine the precise number of beds needed (and ultimately permitted) in each community is a matter of public interest. What is the method used in Virginia and what does it mean to each citizen?

The basic method employed by the State Health Department is the prediction of future hospital utilization based on current rates and the calculation of bed needs based on desired occupancy. By calculating the current utilization rate in terms of hospital inpatient days per thousand population, future utilization can be predicted by multiplying that rate times a projected population in each area. For example, if the set of hospitals in one area records 250,000 patient days over the most recent year and the population in the area is 200,000 people, the use rate is 250,000 ÷ 200,000 or 1250 pt. days per 1000 people per year.

To estimate future utilization, this use rate is simply multiplied times a future population forecast. In the example cited, if the population for some future year is expected to be 220,000, then the inpatient hospital ultilization for that year is projected as 220,000 × 1250 patient days per thousand or 275,000 patient days.

This patient day projection is then translated into expected average daily census (the average number of people in the hospital per day) by dividing total utilization by the number of days in the year. In the above example, 275,000 ÷ 365 = 753.4 average census. To convert this into bed needs, the average census is divided by the desired occupancy of 85%, so that bed needs = 753.4 ÷ .85 or 886.4 beds. This number of beds should serve local needs while maintaining an occupancy of 85%.

The use of the 85% occupancy standard is common (65% of states use it, according to a recent survey[1]). It is also simple, since the calculation can be made with paper and pencil. But is it a "good" figure? Does it result in a determination of bed supply which will truly meet needs and fulfill expectations? In order to answer this, we should have some idea what our expectations are. There are roughly four categories of expectations we might have for the hospitals which serve us:

1. Whenever we need inpatient care there is *some* type of bed *somewhere* in the area which will serve our needs.
2. Whenever we need care, there is a bed *appropriate to our needs* available to us.
3. Whenever we need care, there is a bed of some type available in *the specific hospital* we wish to enter.
4. Whenever we need care there is a bed of the *specific type appropriate to our condition* available in the *specific hospital* we wish to enter.

From the Department of Hospital and Health Administration, Medical College of Virginia, Richmond VA 23298.

Submitted 11-11-76.

Most of the time during the year our expectations will be met if an 85% occupancy figure is used to determine bed needs. This is because the census levels in specific units and individual hospitals rarely go very much higher than the average census. We might wish to know, of course how many times one of the four expectations will *not* be met if the 85% occupancy standard becomes the controlling factor in setting bed needs.

In order to estimate how available beds would be under the 85% occupancy standard, a study was conducted of the actual variations in demand among eight hospitals in the Richmond area. These eight reported daily occupancy across the same period, July 1, 1975, to June 30, 1976. During that time, the actual census levels exceeded the 85% standard on numerous occasions. The following indicate how often each type of expectation would be violated.

Expectation 1 (some bed available somewhere in the area): The highest census total for all eight hospitals occurred on February 4, 1976, when 2440 beds were filled. The average total occupancy for the eight hospitals was 2117.2. Using an 85% occupancy standard, there would be allowed 2117.2 ÷ .85 or 2491 beds. Thus, there would always have been a bed available somewhere in the area to meet maximum demand. In fact, there were 51 "extra" beds if this expectation were all we desired. Presumably many people would have to have been admitted to a type of service other than that appropriate to their condition, e.g., medical or surgical rather than obstetric or psychiatric. Moreover, some would have to rely on a hospital other than their first choice, perhaps one where their physician doesn't even have admitting privileges. However, minimal expectations would have been met, and 85% occupancy could still be maintained with only 2491 beds.

To estimate how well 85% would do for *Expectation 2*, guaranteeing the proper type of bed but *not* choice of hospital, the peaks of census by service were calculated for five of the eight hospitals which reported utilization by service. These are the results.

Unit	Average Census	85% Bed Allowance	Peak Census
Medical-Surgical	1270.4	1495	1452
Obstetric	156.9	185	196
Pediatric	131.0	155	167
Psychiatric	107.7	127	125

As can be seen, peak census in both obstetric and pediatric beds was greater than the 85% occupancy rate would have permitted. In fact, census exceeded the 85% bed figure on 11 days during the year for obstetrics and 18 days for pediatrics. If exactly sufficient beds were available for the peaks in usage of



One-day surgical center, Leigh Memorial Division, Medical Center Hospitals, Norfolk

this type of service, the achievable occupancy levels would have been 156.9 ÷ 196 = 80.1% for obstetrics and 131 ÷ 167 = 78.4% for pediatrics. In contrast, if medical-surgical beds were allocated equal to the peak census, they would have achieved 1270.4 ÷ 1452 = 87.5% occupancy. Psychiatric beds could have operated at 107.7 ÷ 125 = 86.2%.

To judge the impact of 85% occupancy on *Expectation 3,* guaranteeing people choice of hospital but not choice of unit, total census peaks for each of eight hospitals was compared to the 85% bed allowance based on each average census. The results indicated that all but two of the largest hospitals experienced a peak census greater than the 85% allowance.

Hospital	Average Census	85% Bed Allowance	Peak Census
A	44.3	53	60
B	60.6	72	100
C	115.1	136	148
D	232.5	274	291
E	275.5	324	332
F	310.4	366	353
G	363.7	428	432
H	715.1	841	813

Among the six hospitals where peak census exceeded the 85% occupancy bed allowance, this allowance was exceeded on 21 days by A, 68 days by B, 15 days by C, 53 days by D, 14 days by E and one day by G. The larger hospitals, in other words, could just about manage under the 85% standard, while the smaller ones would be denying admission requests all too frequently.

The situation relative to Expectation 4, where people would be guaranteed choice of hospitals and proper placement by unit, would be even worse under the 85% standard. Based on the five hospital reporting census by unit, actual census exceeded the 85% bed allowance the following number of times per unit of each hospital:

Hospital A		
Medical-Surgical	62	times
Psychiatric	10	times
Hospital D		
Medical-Surgical	65	times
Obstetric	37	times
Pediatric	72	times
Hospital F		
Medical-Surgical	0	times*
Obstetric	19	times
Pediatric	83	times*
Psychiatric	0	times*
Hospital G		
Medical-Surgical	2	times
Obstetric	44	times
Pediatric	91	times
Psychiatric	0	times*
Hospital H		
Medical-Surgical	0	times
Obstetric	2	times
Pediatric	29	times
Psychiatric	42	times

* These hospital units did not have sufficient beds to go over the 85% bed allowance; in fact, they had substantially fewer than that level of beds available in those units.

These results suggest that only the larger hospitals and only in medical-surgical units does the 85% standard permit freedom of choice and proper placement for patients every day of the year. The significance of these findings in terms of determining bed needs are many:

1. If the 85% occupancy standard is to be achieved in hospitals, we must be willing to accept restrictions on our freedom of choice of hospitals and type of service, depending on what size hospital and which type of service we seek.
2. The 85% occupancy standard hits particularly hard in obstetric and pediatric care, where denials of admission would be frequent in all hospitals.
3. The 85% occupancy standard would hit particularly hard in small hospitals where denials of admission for all types of care would be frequent.
4. In communities served by one small hospital, the 85% standard would be a severe hardship, frequently denying admission and forcing people to leave town in order to receive hospital care.

These findings raise some serious policy questions:

- Should a single standard of any kind be imposed across all types of care?
- Should a single standard be imposed on all sizes of hospitals, in rural *and* metropolitan areas?
- Should any single agency set a single standard for the whole state when any such standard impacts differently on different hospitals and types of care?

If any standard is to be imposed, it seems appropriate that the impact of that standard on the quality and accessibility of care for all Virginians be carefully examined. If residents of small towns are willing to accept lower occupancy in order to gain greater freedom of choice and access to care, perhaps they must insist on that right. If physicians and their patients wish to maintain certain freedom of choice and access, they should recognize how bed-need decisions affect those values. If we wish to give up some of our choices some of the time in order to control costs of hospital care, we should do so explicitly and willingly, recignizing that compromise. We should *not* permit the imposition of such restrictions unconsciously and incidentally through the universal application of some arbitrary judgment. ■

"Why not let technicians help us reduce costs?"

Mills E. Godwin, Jr.,
Governor of the State of Virginia

WE ARE ALL familiar with the disturbing statistics telling us that health care costs have almost doubled since 1970, that they are now approaching 9 per cent of the gross national product and that present rates will reach 10 per cent in 1980, when health care costs will equal $1,000 for each man, woman, and child in America.

I am delighted that so many organizations most interested in medical care in Virginia have not resigned themselves to the proposition that this is primarily a federal matter, but have instead decided that there are things that we can do here in Virginia, at the state level.

I am therefore asking the State Health Council, with the help of the State Department of Health, to undertake a coordinated effort among various organizations to tell us in specific terms what health care costs are in Virginia, and how we might do our part in reducing them.

In this great country of ours, we have shown the world how to solve problems of applying technology to mass production and mass distribution, and with the advent of the computer and electronic banking, even with mass credit necessary for the other two.

But we have so far avoided a mass approach to providing services. The insistence of our people on their own freedom and independence has so far precluded a mass psychology in our approach to such services as law and medicine.

But if we are completely honest with ourselves, we would have to admit that practitioners in both of these professions have resisted the possibility for greater efficiency offered by the rise of technicians in our society—men and women who not only know how, but know why and who could be of tremendous benefit to us by spreading far more widely the highly-trained capabilities of the LLB and the MD.

By the same token, we have applied the principle of insurance to our coverage of health care, which has helped to avoid financial prostration for many families covered, when some major illness struck.

But those of us in the legal profession are well acquainted with the attitude of juries when they know that the accident is covered by an insurance company. I suspect that the same syndrome operates to some degree in the medical profession as well.

I would therefore suggest as strongly as I can, that health care—quality health care—is such an essential and fundamental need of our people that we have a joint responsibility to see that it is provided in as efficient a manner as possible.

This is an abbreviated version, prepared for this journal, of remarks delivered before the Health Care Cost Seminar, October 19, 1977, at the Richmond Hyatt House.

VIRGINIA MEDICAL

EDITORIAL

"We have too many incentives to go to the doctor and no incentive not to."

TO CONTROL the escalating cost of medical care in Virginia, I propose that there be legislation mandating a substantial deductible and coinsurance on all hospital and sickness insurance policies in the state. As long as first-dollar coverage is available, regardless of cost, our citizens are going to buy it, they are sold on it. And as long as first-dollar coverage is available, there is nothing that can be done to control escalating costs.

As an officer in one capacity or another in The Medical Society of Virginia the past few years, I have had the opportunity to observe and discuss the escalating cost of medical care with many, many persons. I have heard literally hundreds of suggestions as to what could be done to help control costs. Many of these suggestions have merit—but none could do the job as well as eliminating first-dollar coverage.

The problem as I see it is this: We have too many incentives to go to the doctor and to over-utilize our health care system—and no incentive not to do so. In all honesty, I believe the profession's own publicity about the benefits and advances of medicine has contributed to over-utilization of medical care. There was a time when Virginians would not go to see a physician about a mosquito bite or even a bee sting. Today I see such things almost daily in my office.

We can get into legitimate differences of opinion as to what constitutes over-utilization, of course. And we even get back to the philosophical question, "What does the government want to do for its people?" Does it want to run their lives totally from the cradle to the grave, to offer, and even insist that they ask for, all the medical care they can get?

Or can we somehow begin to realize that the world is finite, that there is not enough of anything for everybody to have their fill, that some system of priorities must be imposed?

If I thought our present course the best for everyone in the United States, including the poor, I certainly would be in favor of continuing it; but it is my belief that our present course will lead to a breakdown in the medical care system. This in turn will lead to socialization. Socialization will lead to rationing of medical care (for wherever medicine is socialized, the planners ration medical care by reducing the number of hospitals and physicians). Everyone will suffer—most of all the poor.

We need to discourage the utilization of medical care. This must take the form of a substantial deduct-

Presented before the Subcommittee on Health of the House Committee on Health, Welfare, and Institutions at the Virginia State Capitol, Richmond, August 9, 1977.

The author, a past president of The Medical Society of Virginia, advises the reader that his remarks here published are made as an individual and do not represent a position of the Society.

ible and coinsurance. Insurance must again become a system of protection against catastrophic loss, not a method of budgeting for future expenses. I had high hopes at one time that something could be done on a voluntary basis in relation to deductibles, but the public has been sold such a bill of goods (and the unions especially are so determined to get first-dollar coverage) that it appears nothing can be done except by legislation. This is disheartening to me, for I am opposed to legislative mandates of all types. In this case, however, I now can see no alternative.

Do you remember what happened when automobile insurance companies thought they could give first-dollar coverage on collision insurance? The companies lost money, the confusion was horrendous. Try and buy first-dollar collision coverage now. You can't. Then, consider what is happening in the homeowners' insurance field. There, many persons each year are managing to find enough damage somewhere, somehow, to pay their premiums—and the deductibles are going up rapidly to combat this abuse. In the medical insurance field, the employer usually pays at least half of the premium and the unions push for first-dollar coverage, so that the law of supply and demand cannot control the problem, and correction must be mandated.

We must look beyond the cry that such a law would be detrimental to the poor: The very poor are covered by Medicaid. The elderly are covered by Medicare (which has a deductible—not a realistic deductible, but a deductible nonetheless). The remainder of our citizens could benefit from a substantial deductible. They could save enough on their premiums in two or three years to satisfy the deductible element; this is a good bet, for the average person does not go into the hospital as often as every two or three years.

The biggest advantage is that such a deductible will deter an individual from going to the hospital or the doctor's office unless he or she really needs to. Also, the doctor would have to justify each and everything he does, which he does not have to do today. And the hospitals, which now work on a cost-plus basis, would have to tighten their belts and watch their pennies, as they have not had to do for many years.

In summary, I believe that a $300-$500 deductible on medical insurance, plus coinsurance on every hospital insurance policy, with no first-dollar coverage for any medical expense, would be an answer—not *the* answer, but *an* answer, to the escalating cost of medical care in Virginia.

RAYMOND S. BROWN, MD

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"Cost is more than a four-letter word. . ."

COST is more than a four-letter word, to be decried as such.

Medical and hospital cost is all the many syllables of new technologies.

It is all the many syllables by which we identify new drugs that save health and life.

It is the expense of chronic illness that often accompanies the many years that medicine has added to human life. The Congressional Budget Office, which is Capitol Hill's fiscal watchdog, has predicted that under existing programs the federal government by 1980 will be spending at least $7.2 billion annually on long-term care, compared with $3.1 billion in 1975.

Cost is also the upshot of a greater demand for all kind of health services, triggered by the growth of health insurance.

It is general inflation, the swollen prices the medical profession must pay for what it needs, including the staggering premiums for malpractice insurance. Indeed, physicians' fees have risen less than their business expenses. The latest comparative figures from the US Bureau of Labor Statistics show that between 1966 and 1973 physicians' "real earnings" grew only 6.4%, while those of production workers climbed 7.5%. And that was before malpractice premiums skyrocketed.

In sum, cost is primarily the unavoidable consequence of medical progress and dissemination, and of our being entrepreneurs in a socioeconomically sensitive field.

RICHARD E. PALMER, MD,
Past President,
The American Medical Association

Excerpted from a speech before the Health Care Cost Seminar on October 19, 1977, at the Richmond Hyatt House.

"I applaud the Society and Doctor Brown. . ."

MANY of the points raised by Dr. Brown are good ones. I am in whole-hearted agreement that the Bureau of Insurance has not done a good enough job of encouraging the insurance industry to develop health insurance policies that will discourage rather than encourage treatment in acute care facilities and provide the proper financial incentives to contain health care costs.

It is for this very reason that the Commissioner of Health and myself are sponsoring a joint resolution at this session of the General Assembly establishing a study commission to explore all facets of the problem of the rising costs of health care, with particular emphasis on how the insurance industry can do a better job of helping to solve the problem.

In summary, the State Corporation Commission and I applaud the efforts of The Medical Society of Virginia and Doctor Brown on this very important issue.

JOHN G. DAY,
Commissioner of Insurance,
State of Virginia

"Virginians, like all Americans, have trouble setting limits for themselves."

THE RESOURCES of the Virginia State Department of Health are limited; one of our major concerns is the rising cost of health care. Our costs for providing what is usually considered the basic health programs—public health nursing, preventive care such as immunizations, chronic disease control—have doubled in the last seven years; so have our expenditures for maternal and child health programs. In the same seven years, our Medicaid dollars spent have increased fourfold; the national expenditure only doubled in the same period, but one must take into account that Virginia added additional services and broadened eligibility.

Almost 50% of Medicaid dollars goes to long-term care—the community nursing homes and the facilities operated by the Department of Mental Health and Mental Retardation. These services properly belong among the health care options available in a comprehensive system, yet the treatment and care of dependent persons—the aged and disabled—looms as an increasingly large and costly issue.

Virginia Medicaid has had, since its inception, the objective of providing those services which would allow the patient to progress toward self-care and independent living. We promote early discharge from hospitals, providing nursing home care. This is economical. In 1972, a four-day nursing home stay cost the same as one hospital day; today we can purchase seven nursing home days for one hospital day.

In 1977 Medicaid paid 112% more dollars for hospital care than it did in 1972. We can compute that our utilization, based on hospital days paid for, actually decreased by 13%; that the dollar inflation was 40%; and the remainder, 72%, might be attributed to level of service.

I believe public understanding of and support for cost control is growing, but part of the problem remains, and that is: Virginians, like all Americans, have trouble setting limits for themselves. There is evidence that we soon will be spending 20-30% of our gross national product on medical care, and we as a nation cannot afford that.

What kind of care can we provide and how can we provide it without bankrupting the country? Will we spend more on prevention? Will we change the delivery system? Will we set limits for government as well as citizens? Will we find ways to convince individuals to accept more responsibility for changes they can make to stay healthy? *Will we?*

JAMES B. KENLEY, MD,
Health Commissioner,
State of Virginia

Presented in expanded form at the Health Care Cost Seminar on October 19, 1977, at the Richmond Hyatt House.

For more on medical costs, turn the page.

"Physician decisions are pivotal in the hospital cost situation."

THE HIGH COST of hospital care is an extremely complex subject. The best I can do is to skim the surface of an explanation.

1. One obvious reason is inflation.

2. Another reason is the increased demand for health care service, brought about by such programs as Medicare, Medicaid, and other third-party-payor arrangements. In fiscal 1970, 14 million people were covered by Medicaid; last year 23 million were covered. It takes little imagination to figure the impact of this program. Other third-party payors have contributed substantially to the increase in health care costs, but the patient has escaped the immediate impact on his pocketbook. As a result, he doesn't worry about over-use of facilities and services—and his expectations are far higher than they would be if he did.

3. Top-dollar insurance coverage accompanies demand as another reason for the high cost of health care. The patient does not share the cost of his care. For years, the textile workers in a one-hospital, heavily industrial city of Virginia have participated in a co-insurance program. There has been little abuse of this program. The United Mine Workers found that when deductibles were required of members, hospital admissions went down.

4. Organized labor's increasing effort to organize all hospital employees, now legal under the amended Taft-Hatley Act, is still another cost factor. The hospital industry is labor intensive, with payroll costs representing more than half of the hospital budget. If unions achieve their goal of organizing hospital employees in Virginia, the cost impact will be huge.

5. Minimum wage requirements make still another strong impact on the cost of labor and the resulting increase in the cost of health care. The federally-mandated increase taking effect this year paves the way for an increase of $2 billion in hospital costs.

6. Lack of coordination and poor communication regarding health planning activities is another culprit in the hospital cost situation. This has resulted in confusion about policies and costly duplication of effort. The Virginia Hospital Association strongly supports the concept of planning, but Health Systems Agencies appear to be typically large, cumbersome committees comprised of interest-group representation and ill-defined consumers who have done little to inspire confidence in either the providers of care or the public.

7. The proliferation of federal programs and regulations aimed at health care is a major reason for high cost. In 1977, at least $22 was added to each hospital bill by the cost of just eight federal regulations, according to data submitted to the American Hospital Association by hospitals over the country. These include such things as improving hospital access for the handicapped; expansion of PSRO activities; testing of nonclinical equipment; proliferation of forms required by federal programs (which could be avoided by using a standard national billing form).

8. Poor administration of the Certificate of Need law is a further factor in the hospital cost picture. The VHA actively influenced the passage of this legislation, which was designed to prevent the overbuilding of hospitals. However, 93% of all Certificates applied for have been granted, or 90% of the dollar volume.

9. Physician decisions remain a pivotal factor in the entire hospital cost situation. It is physicians, not hospital management, who admit patients to the hospital the doctor decides upon, determine the extent of diagnostic testing, what treatment the patients should get, what medication, and when they can be discharged. A hospital and its entire staff, excluding the medical staff, are subject for the most part to the decisions of physicians.

10. A final reason for the high cost of health care is the lack of personal responsibility on the part of the public for its own health. This is an unpopular position, because such personal responsibility calls for a vastly changed style of living for every Virginian. The prevalent attitude appears to be: Take care of me after I abuse my body, and give me the best of accommodations. But don't expect me to pay the price!

What can be done? There are no easy answers, but we in the hospital industry are making every effort to keep the patient out of the hospital and reduce each length of stay. We are trying to tighten administrative procedures and avoid duplications.

One thing becomes increasingly clear to me: We will get exactly nowhere in the control of hospital costs unless all those involved in health care and the government begin to communicate more effectively, cooperate with each other's goals, and work out compromises on our varying positions—for the good of the whole and the good of the patient.

STUART D. OGREN, Executive Director,
Virginia Hospital Association

Presented in expanded form at the Health Care Cost Seminar on October 19, 1977, at the Richmond Hyatt House.

VIRGINIA MEDICAL OBITUARY

Walter J. Geeraets, MD

Dr. Walter J. Geeraets, professor and acting chairman of the ophthalmology department at the Medical College of Virginia, died September 14 at his home in Richmond. He was 54 years old.

A native of Mönchengladbach, West Germany, Dr. Geeraets came to MCV in 1957 as a National Institutes of Health trainee in ophthalmology. He became an associate professor in 1960 and full professor in 1963. He had been acting department chairman since last year.

Dr. Geeraets received his premedical and medical training from Rheinische Friedrich Wilhelms University in Bonn. He recently published the third edition of his text, *Ocular Syndromes*, and he was the author of three other books and more than 100 articles. Some of his articles were published in this journal; the most recent was "Variables in Controlled Studies of Diabetic Retinopathy," coauthored by Dr. William W. Carrolls and published in VIRGINIA MEDICAL of November, 1976.

He was a member of The Medical Society of Virginia, the Richmond Academy of Medicine, the American Medical Association, the Association for Research, Vision, and Ophthalmology, the Pan-American Society of Ophthalmology, the German Ophthalmology Society, and other organizations related to his specialty.

Dr. Geeraet's wife, Dr. Ragnit Geeraets, who survives him, is associate professor of anatomy and ophthalmology at the Medical College of Virginia.

Adrian J. Delaney, MD

Dr. Adrian J. Delaney of Alexandria, Virginia, died on November 24, 1977, in Circle Terrace Hospital due to thrombosis of the left middle cerebral artery.

He was born in Brooklyn, New York, March 21, 1907. He graduated from Columbia University in 1927 and Georgetown University School of Medicine in 1931. He served as a surgeon in the navy from 1931 until he retired with the rank of captain in 1954. He was chief of the otolaryngology service of the Bethesda Naval Hospital between 1948 and 1954. He was one of the pioneers in the development of the surgical treatment of otosclerosis and published papers on the subject. He was clinical assistant professor of otolaryngology at Georgetown University, Washington, DC.

He was chief of staff of Alexandria Hospital in 1958 and Circle Terrace Hospital in 1962. He was president of the Alexandria Medical Society, 1964. He was a fellow of the American College of Surgeons and a diplomate of the American Board of Ophthalmology and Otolaryngology. He was a member of the American Medical Association, The Medical Society of Virginia, the American Academy of Ophthalmology and Otolaryngology, and the Association of Military Surgeons.

George W. Botts, MD

Dr. George Winston Botts, longtime surgeon in Wise, Virginia, died October 13 in a Norton, Virginia, hospital. He was 89 years old.

Born in Washington County, Dr. Botts studied and trained at Tulane University, the Universities of Pennsylvania and Illinois, and Harvard University. He had been a professor of bacteriology and pathology at the University of Louisville.

Dr. Botts had been a member of The Medical Society of Virginia more than 50 years. He also belonged to the Wise County Medical Society, the American Medical Association, and the Ear, Eye, Nose and Throat Society.

Theodore Maisel, MD

Dr. Theodore Maisel, 67 years old, died October 25 in Miami, Florida, where he had lived since 1973. Dr. Maisel was in the general practice of medicine in Richmond from 1937 to 1973, and during those years was a member of The Medical Society of Virginia.

Claude L. Neale, MD

Dr. Claude L. Neale, Richmond psychiatrist, died November 13 at the age of 74 years.

Born in Saluda, Virginia, Dr. Neale was graduated from the University of Virginia and the Medical College of Virginia. He advanced to the rank of lieutenant colonel during service in the Army between 1929-1942, then joined the MCV staff and also conducted his own private practice. On his retirement five years ago, he was a professor of psychiatry.

Memoir of Everett G. King 1910-1977

By G. S. Mitchell, Jr., MD

Dr. Everett Giddings King died unexpectedly in Newport News, Virginia, on September 21, 1977.

Dr. King was born in Oklahoma on June 22, 1910. He received his bachelor's degree at the University of Oklahoma in 1931 and his doctorate of medicine at the University of Oklahoma in 1933 and then was in general practice in Oklahoma 1935-1941 and 1946-1950. He earned his MPH degree at the University of California in 1952. He also studied for one year at the US Army War College, Carlisle, Pennsylvania, 1955-1956.

His military experience spanned the WW II years from 1941 to 1946 as a surgeon (medical officer in charge) of various task forces and base sections in the Southwest Pacific area. From 1950 to March of 1967 he served as surgeon at five different locations in Europe, Japan, and the United States. His service from 1950 until military retirement were spent in medical staff and administration positions in the Army. He retired in 1967 from position of Surgeon, US Continental Army Command, Fort Monroe, Virginia.

His vast experience as a health administrator was quickly utilized when on April 1, 1967 he became director of the Newport News Health Department and saw the building and completion of the new facility now known as the Peninsula Health Center. Besides the normal health department functions, he directed such activities as public health nursing, home health services, environmental services, alcoholism counseling, vital statistics. Specialty clinics, such as ob-gyn, surgical, allergy, family planning, were also under his leadership, providing a total outpatient care facility for indigent and others.

He was instrumental in the setting up of the Riverside Family Practice Residency Center, which was afforded an area in the Health Center for the training of family practitioners. This effort, cooperative with Riverside Hospital, provided a unique opportunity for training those residents. From June 1973 to December 1974 he chaired the Goals and Objectives Committee for the Virginia State Health Commissioner. Effective June 1, 1974 he was appointed Medical Director of the Eastern Virginia Region of the Virginia State Health Department, assuming operational responsibility for some 20 health departments.

Dr. Everett King will be remembered in this community for his devotion and his leadership in the health care field.

Memoir of N. S. Payne 1921-1977

By Alan Jefferies, MD, John Foster, MD, John Sellers, MD, and H. William Fink, MD

Dr. Nelson S. Payne, who died on June 7, 1977, was born in Norfolk, Virginia 56 years ago. He graduated from VPI in 1941 and received his medical degree at the Medical College of Virginia in 1944. He interned at DePaul Hospital, Norfolk, and was a medical officer in the US Navy from 1945 to 1946. He entered general practice in Norfolk and quickly established a busy and successful private practice. His love of children, however, prompted his return to the Medical College of Virginia in 1950 for a two-year pediatric residency. Returning to Norfolk, he was soon recognized as one of the leading pediatric practitioners in the area. His warm personality, friendliness, and compassion won for him an enviable reputation, among both his patients and his peers.

He was the first director of the Child Development Clinic in Norfolk and continued to work at the CDC until the time of his death. He was a member of the Norfolk Academy of Medicine, the Virginia Pediatric Society, The Medical Society of Virginia, and had been president of the Tidewater Pediatric Society. He was on the staffs of DePaul, Norfolk General, and Kings Daughters Childrens Hospitals and served faithfully and well as attending physician in their teaching programs.

He was never too busy to stop and chat with friends, patients, and colleagues, and in all the years of association with him, the writers never heard him utter a bad word about anyone. His last years held trials and tribulations for him, but he continued to attend all meetings, keep up with the literature, and remain devoted to his practice. He will be very much missed.

Memoir of J. G. Jantz, Jr. 1895-1977

Dr. Jacob Gary Jantz, Jr., 82 years old, died October 4, 1977, in Bedford, Virginia, after a long illness.

Dr. Jantz was born in Hillsboro, Kansas. He received his AB degree from Bluffton College in Ohio and a master of science degree in public health from the University of Michigan. After teaching for two years at William and Mary College, he completed his studies in medicine and surgery at the Medical College of Virginia. In 1936 he came to Bedford to practice, stayed a short time, then returned to Kansas; he

resumed practice in Bedford in 1939 as surgeon and administrator of John Russell Hospital, which merged with Bedford County Memorial Hospital in 1955. He was elected the first chief of staff at the new hospital, where he was active until his retirement at the age of 75.

He was a member of the American College of Surgeons and the International College of Surgeons. "Dr. Jake" was well known for his dedication to the Lions Club, his generous sharing of his lyric tenor voice in church and community musical programs, and his faithful attendance on the athletic field for all high school games.

His high standard of medical and surgical care are his legacy to the profession in the Bedford community. He will be greatly missed by all who knew him.

Memoir of Robert D. Shreve 1918-1977

By L. R. O'Brian, Jr., MD, Frank N. Buck, Jr., MD, and John R. Saunders, MD

Dr. Robert D. Shreve, highly respected and beloved physician, died at home July 2 after 25 years of service to Altavista, Virginia, and the surrounding community in the practice of general medicine.

Dr. Shreve was born December 10,1918, in Littleton, West Virginia. He was a graduate of the Medical College of Virginia. He was a Fellow in the American Academy of Family Practice, and a member of The Medical Society of Virginia, the American Medical Association and Lynchburg Academy of Medicine.

Prior to coming to Altavista, Dr. Shreve taught school in West Virginia and, during World War II, served in the Army Air Corps as a pilot. He served on the school board of Campbell County for 15 years and was its chairman from 1956 to 1971. He was a faithful member of the First Baptist Church of Altavista, serving as Sunday school teacher and member of the board of deacons. He was president of the Virginia Association of Professions in 1973.

Although he was an extremely busy member of the medical profession, he always had time to devote to community service in the areas noted and in personal relationships with individuals and activities less likely to be publicly acclaimed. When it became apparent to him that he was suffering from an illness from which he would not likely recover, he continued his professional activities and services to his community, and especially to his patients, without regard to his own personal needs and comfort and continued to do so until his illness was terminal. Bob Shreve achieved and lived up to the highest ideals of the medical profession.

Memoir of W. R. Payne 1900-1977

By Paul Hogg, MD, A. A. Creecy, MD, and T. A. Wash, MD

It is an exceptional person who can do one useful thing well, as in following a chosen career. More unusual are those who find time too for a variety of other valuable related or unrelated endeavors. And when such a person gains merited renown well beyond his own community, he moves into the category of the truly unique. Newport News *Daily Press.*

This is a tribute to a unique physician, Waverly Randolph Payne, Newport News, who died on April 24, 1977 at the age of 77 years.

Dr. Payne was born in Midlothian, Virginia. He attended the University of Richnond and graduated with the degree of medicine from the Medical College of Virginia in 1923.

He received his training at the Medical College of Virginia Hospital, Richmond, and the Elizabeth Buxton Hospital, Newport News, and his graduate training in gynecology and obstetrics at New York Lying-in Hospital. He was chief resident in obstetrics and gynecology at the Jersey City Hospital in New Jersey. He kept abreast of his specialty by making periodic visits to the Mayo Clinic in Rochester, Minnesota.

Dr. Payne's membership in various civic and professional organizations were numerous, and he held high positions in local, state and national organizations pertaining to his specialty; for example, he was a founding member and past President of the South Atlantic Association of Obstetricians and Gynecologists.

His first love, other than the practice of medicine, was directed towards his alma mater, the Medical College of Virginia, where he served as president of the Medical College of Virginia Alumni Association, member of the Board of Trustees of the Medical College of Virginia Foundation, and member of the Medical College of Virginia Board representing the MCV Alumni Association. He also was past president of the Virginia State Board of Medical Examiners.

The greatest tribute that can be paid to Dr. Payne is to recognize the compassion, interest and professional ability that he gave his patients. Because of this, he was loved by everyone, not only his patients but everyone he met and counselled during his lifetime. He loved a good story and always enjoyed telling one. He was a devoted husband and father. We and his large number of friends and former patients will miss him.

WHO'S WHO IN VIRGINIA MEDICINE

Dr. **Edwin L. Kendig, Jr.,** *Richmond,* was chosen President-Elect of the American Academy of Pediatrics at its recent meeting in New York. The Academy now has 19,000 members. Dr. Kendig, third vice-president of The Medical Society of Virgina, is professor of pediatrics at the Medical College of Virginia and director of pediatrics at St. Mary's Hospital, Richmond. His pediatrics experience in Richmond encompasses 35 years, and he has been president of the Virginia Pediatric Society and the Richmond Academy of Medicine.

The Lynchburg College Alumni Association, at its fall convocation, named Dr. **Thomas A. Walker,** *Emporia,* as the recipient of the college's T. Gibson Hobbs Memorial Award, given in recognition of outstanding contributions to alma mater, church, and community. Dr. Walker, a graduate of the Medical College of Virginia, is chief of staff of Greensville Memorial Hospital, Emporia.

The Northern Neck Medical Association at its fall meeting at Kilmarnock elected these new officers: Dr. **Robert Hoyt,** President-Elect, and Dr. **David Summers,** Vice-President. Dr. **Frank S. Bacon** took office as president, and Dr. **Norman R. Tingle** was reelected secretary-treasurer.

Dr. **Edwin L. Williams, II,** has been installed as new president of the *Roanoke* Academy of Medicine. These physicians took office with him: Dr. **Charles L. Crockett, Jr.,** president-elect; Dr. **Philip Kistler,** vice-president; Dr. **William C. Ward,** secretary-treasurer; Dr. **R. E. Berry,** chairman of the board of directors. Four were named by the Academy to head committees: Dr. **J. W. Wilkes,** ethics; Dr. **R. D. Knopf,** mediation; Dr. **Harold Haley,** public relations; Dr. **Gene Godwin,** aging and extended care.

The American Academy of Ophthalmology and Otolaryngology elected Dr. **Cary N. Moon, Jr.,** *Charlottesville,* its first vice-president at its convention in Dallas.

Dr. **Charles J. Harkrader, Jr.,** well-known and beloved *Bristol* surgeon for almost thirty years, retired early in October. Born and raised in Bristol, Dr. Harkrader received his medical degree from the University of Virginia. Throughout his practice in Bristol he has been on the staff of Bristol Memorial Hospital, and for many years he has been associated with Drs. **Frank Blanton, Talmadge Buchanan,** and Kermit Lowry.

Dr. **Gayle G. Arnold,** *Richmond,* was elected secretary-treasurer and a member of the board of directors of the American Academy for Cerebral Palsy and Developmental Medicine at its recent meeting in Atlanta. Dr. Arnold is associate clinical professor of pediatrics at MCV and medical director of the Richmond Cerebral Palsy Center. The Academy, a multidisciplinary professional society, was founded in 1948 and now has 1,000 members.

A postgraduate course on infections at the Southeastern Surgical Congress' assembly in New Orleans in mid-February will be chaired by Dr. **William R. Sandusky,** *Charlottesville.*



WHO'S WHO IN VIRGINIA MEDICINE

Members of his community saluted Dr. **Gerard V. Thompson, Sr.,** *Chatham,* when he stepped down recently from the Pittsylvania County School Board—and well they might. for Dr. Thompson had been an energetic and concerned Board member for 22 years and for one of those years was its chairman. Amid many tributes, the physician was given an engraved plaque, bearing a golden gavel, to signify his community's appreciation.

Dr. Thompson, MSV Councilor for the 5th district, will keep up his active concern for education, for he was recently elected chairman of the board of trustees of Hargrave Military Academy.

New president of the Washington Orthopaedic Society is Dr. **H. Rolf Noer,** *Arlington.* The Society has as members physicians from Virginia and Maryland as well as Washington, D.C.

Dr. **Sam D. Graham,** chief of urology at King's Daughters Hospital in *Staunton,* was given the annual Roy M. Hoover Award by the Virginia Rehabilitation Association at its annual workshop recently in Virginia Beach. The award recognizes a medical doctor for "substantial cooperative service to rehabilitants in Virginia." Dr. Graham is also a University of Virginia Hospital faculty member and chief urological consultant to the Woodrow Wilson Rehabilitation Center, Fisherville.

Melvin L. Horne, MD, formerly of *Newport News,* has been appointed director of medical administration at Norwich-Eaton Pharmaceuticals, Norwich, New York.

"This building is dedicated to **Bliss King Weems,** MD, humanitarian and founder of modern medicine in *Waynesboro.*" So reads the plaque on the new Medical Arts Building in Waynesboro, installed in honor of Doctor Weems by his associates: Drs. G. C. Ayers, **John R. Talbert,** and **J. Powell Anderson.**

Dr. **G. R. Smith, Jr.,** *Shawsville,* president of the Virginia Academy of Family Physicians, was one of eight runners-up in the 1977 "Family Doctor of the Year" selection sponsored by the American Academy of FPs and *Good Housekeeping* magazine. Dr. Shaw has practiced in Shawsville for 22 years and founded the Alleghany Clinic there.

There's a new pain control clinic at the Memorial Hospital in *Danville* under the direction of Dr. **Ruperto Perez, Jr.** This brings the total of pain control clinics in Virginia to six—one in Charlottesville, one in Falls Church, three in Richmond, and the new one in Danville.

Dr. **J. J. Grizzard,** *Branchville,* was the honoree recently at a special recognition and portrait dedication ceremony sponsored by civic and women's clubs of Branchville and four other Virginia communities in Southampton County. Dr. Grizzard retired in 1977 after 44 years of medical service to rural residents in the area. Hundreds of his patients gathered at the ceremony to wish him well.

Dr. **Peter W. Houck,** *Lynchburg,* has been awarded the American Diabetes Association's citation as Volunteer of the Year for Virginia. Dr. Houck is president-elect of the state board of the Virginia Affiliate of ADA.

Five Virginia physicians have been admitted to fellowship status in the American College of Cardiology. They are Drs. **Andrea K. Hastillo** and **Stanley C. Tucker,** *Richmond;* Dr. **Syed A. Shmed,** *Danville;* Dr. **Earl W. Fuller, Jr.,** *Franklin;* and Dr. **Parviz M. Sadjadi,** *Clifton Forge.*

For his "outstanding contribution in bettering the lives of visually handicapped individuals," Dr. **F. Ellison Conrad,** *Abingdon,* has received an Award of Commendation from the Virginia Chapter of the American Association for Workers for the Blind.

Dr. **Norbourne Berkley Jeter,** who retired in 1976 after 46 years of practice in the *Covington* area, was given the Covington Kiwanis Club's 1977 Citizen of the Year Award. "No one in Covington or Alleghany County has done more for people than Berkley Jeter," said one of the many persons who spoke in tribute.

Dr. **Wyndham B. Blanton, Jr.,** was incorrectly identified in a picture in our December issue as his brother, Dr. **Frank M. Blanton.** The Editors very much regret the error.

Thank You!

The Editors appreciate the superlative assistance of these physicians in the review of manuscripts during 1977:

Custis L. Coleman, MD
J. Shelton Horsley, III, MD
George R. Minor, MD
M. Pinson Neal, Jr., MD
M. E. B. Owens, Jr., MD
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James Asa Shield, Jr., MD
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GET READY for the Rhine River Adventure, next in the MSV series of INTRAV tours! It will be an 11-day luxury holiday through the heart of Europe, with three days in beautiful Brussels while sheltered at the Hyatt Regency; three days aboard a cruise ship on the Rhine River, to view the vineyards and picturesque ports of this charming valley; and three days at the Munich Hilton, where each room has a balcony overlooking this fairy-tale city in the Bavarian Alps. Great food everywhere. Departure by chartered jet from Dulles Airport on July 19; return to Dulles on July 30. Brochure with full details is in the mail to all MSV members.

ANTIQUE SHOW and sale sponsored by the Richmond Academy of Medicine Auxiliary to benefit Sheltering Arms and Crippled Childrens Hospitals. At the Richmond Hyatt House February 3 and 4 (11 AM to 10 PM) and February 5 (11 AM to 6 PM) with patrons champagne reception and show 8 to 10 PM February 2. Featured will be an exhibit of 18th and 19th century silver on loan from the Valentine Museum and a lecture, "Jewelry Through the Ages," by L. Leroy Levitt, Jenkintown, Pennsylvania. For more information: Mrs. Ronald Calkins, 10330 Cherokee Road, Richmond VA 23235, 804 272-0708.

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Letter from the President:

As YOU have probably noticed, during the last few months this space has devoted a great deal of attention to encouraging members to become more active in the Society, in their communities, with legislators and legislation, and in otherwise becoming more involved in their professional organizations' activities. And it's probably fair to expect that a lot more ink will be used on this and other closely related themes, which are medicine's new dimensions.

There are two reasons for this. One is that we've seen recently how this activism can produce positive results. For instance, physicians were successful last fall in causing their local Health Systems Agencies to reconsider a number of recommendations in their health plans; those recommendations, if implemented, would have had an adverse affect on the quality and availability of care in that community. In the political arena, we saw how participation by physicians contributed significantly to the election of officeholders at the state and local level.

The second reason that activism is so essential is that the need for greater involvement by physicians grows in direct proportion to government movement toward tighter regulation.

As I've travelled about the state the past few months, a number of physicians have asked what they can do to help the Society. The answer is simple—plenty. There are literally scores of tasks with varying demands on a physician's time that the Society needs to have done.

Several months ago I asked Council to submit lists of nominees for specific committee assignments. I have relied heavily on those recommendations and, with them and my own selections, I have endeavored to do three things: where applicable, expand the committee over the state to get a broader involvement; where possible, have the committee include only people who are known to turn in good performances; and, when feasible, add fresh genes by appointing

physicians who have been in practice for less than five years. This task, to date, has resulted in 216 appointments to 34 committees and I'm not through yet.

The Society still needs an ad hoc membership committee to bring more physicians into the organization. There is major work to be done on the bylaws. Our annual banquet could benefit from an overhauling. The House has directed that a committee on the aged be appointed. The new Vanguard Committee will need a great deal of help in each of the five HSA regions. The Society is called on to make individual nominations to many governmental agencies and organizations. There are many more areas for service and, since we must function under current bylaws that charge the President with making such appointments, I will, of course, continue to do so. However, if you want to join the cadre of members personally contributing to making The Medical Society of Virginia a more responsive and effective organization, advise me of where and how you would like to become involved in the committee structure and we'll see what can be done.

I believe that our system should be changed to involve more than just the President in making such nominations and appointments. The Council, whose members are in close touch with local physicians, could make most of the decisions on standing committees and the customary ad hoc committees that have grown to standing committee status. A bylaws change would be necessary first.

In any event, the least a member can do is support the many efforts being made by professional groups on his or her bahalf. First, we all know physicians who don't belong to The Medical Society of Virginia—encourage them to join us. Secondly, some colleagues in your own component society are not members of the AMA—encourage them to join now. We get our representation in the AMA House of Delegates solely by joining the AMA. And finally, join and participate in VaMPAC. These kinds of contributions will go a long way toward satisfying the minimum personal requirements of medicine's new dimensions.

William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

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LETTERS

"Drugs do not make a diagnosis; training and clinical experience do."

By means of legislation being sought by optometrists, optometry is to be re-defined—by statute—as a profession encompassing "examination, diagnosis, and treatment of the visual system." Furthermore, optometrists are to be permitted use of "topical pharmaceutical agents"—mydriatics, cycloplegics, anesthetics—in their "diagnostic" examinations, provided they have taken a brief course in pharmacology and passed an examination approved by the optometry board.

With so many legitimate concerns facing our society, and with all of us in one way or another working to help our country attain the perceived goal of appropriate health care services, it is all the more disheartening to witness efforts of non-medical persons to become "providers of health care" by means of public persuasion and legislative legerdemain, rather than by the more laborious and traditional route of education.

For 70 years or so, since the formal establishment of optometry, many in the field have rendered competent and expert service in providing refraction and eyeglasses. The title "Doctor" was accorded such practitioners initially by legislation and later by degree-granting institutions accredited by their own optometric societies and boards. Only seven of the 13 schools of optometry are parts of universities, and these public-supported institutions have been established by legislation resulting from pressure of special interest groups rather than by perceived academic need.

Partly by the coining of the term "vision care," optometric organizations and publications have distributed subtly worded information which ascribes total ophthalmic diagnostic skill to optometrists. Such literature may acknowledge that some eye diseases or surgical problems may require referral to "other health care professionals." A number of state legislatures have passed laws permitting optometrists to use designated topical pharmaceutical agents. Why this has not run afoul of the medical practice acts is not clear. Furthermore, a published goal of optometry is to become, by law, the designated "point of entry" for all eye care.[1]

In our own state, there have been bills submitted and passed which appear designed to enhance by language the professional status of optometrists.[2] By legislative command, the staff of the State Council on Higher Education has undertaken three studies in as many years in an attempt to justify the establishment of a school of optometry, while failing in any study to demonstrate a need or demand for more optometric services in Virginia. Indeed, there has been an apparent reluctance to obtain such information, despite the urging of lay and professional advisors.

A letter mailed last year to some of Virginia's physicians from the Virginia Optometric Association proposed to identify optometry as part of the "health care system" and optometrists as "health care practitioners." Refraction and fitting of eyeglasses are not "health care." While there is obvious need to have refractive errors recognized and corrected for clear, comfortable vision, such practice—for which optometrists are trained—seldom has any relation to the health of the eye. While it is certainly true that optometrists are in position to see people with visual complaints caused by systemic or ocular disease and may have the technical expertise to document visual functions, recognition of the need for medical care is not preferentially vested in the profession of optometry. Many citizens go to optometrists because they are available or visible "eye doctors"; they may not realize that they are seeing non-medical practitioners.

Optometrists as a group are providing appropriate and necessary services. Probably most optometrists are willing to continue operating in a role appropriate to their education and experience. However, some of the "leadership" of optometry have brought forth anachronistic and anomalous proposals concerning eye care, which have potential for harm to an uninformed public. It is imperative that all physicians help to educate the general public regarding the distinctions between non-medical personnel and physicians, whether the part of the body involved is the eye, the limb, the psyche, or the spine. It is also imperative, even though it may be distasteful to many of us, that we keep our legislators informed of these matters.

We live in an age when the medical profession is being required to document its performance and education in order, it is hoped, to assure the citizenry

proper health care. It is ironic that at the same time we are being asked, by means of legislation, to accept into the health care system persons who are neither medically trained, medically licensed, nor medically supervised.

Virginia physicians should express to their legislators their opposition to this bill, variations of which have been defeated in a number of states during the past year.

John B. H. Caldwell, MD
301 Medical Arts Building
Richmond VA 23219

1. Pennsylvania Optometric Association, May 6, 1975
2. Senate Bill No. 2, 1976

Seeks a Surgeon's History

I am trying to research the life of Dr. Daniel Smith Green. He was born near Brandy Station. He was a surgeon in the navies of both the United States and the Confederate States. He was surgeon-in-charge of two hospitals for the Army of the Potomac.

Edward S. Milligan
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MEETINGS ABOUT MEDICINE

February

Southeastern **Surgical** Congress, Annual Assembly, February 19-22, Fairmont Hotel, *New Orleans.* Anne Glade, The Southeastern Surgical Congress, 315 Boulevard, NE, Atlanta, GA 30312, 404 681-3733.

Annual Meeting, Virginia Chapter of the American Academy of **Pediatrics,** *Williamsburg,* February 24–25. Douglas E. Pierce, MD, 1201 Third Street, SW, Roanoke VA 24016.

March

Law Institute on Hospitals and Medicine, sponsored by Departments of **Legal Medicine** and **Hospital-Health Care** Administration, Medical College of Virginia, *Richmond,* March 3. MCV-CME, Box 91, MCV Station, Richmond VA 23298, 804 770–8207.

Infants at Risk, sponsored by **Children's Rehabilitation** Center and Division of Continuing Education, UVa, *Charlottesville,* March 2. Anne Raynor, CRC Conference Coordinator, 804 924-5161.

14th Annual **Radiology** Postgraduate Course: Practical Neuroradiology, sponsored by Departments of Radiology and CME, Medical College of Virginia, Conference Center, *Williamsburg,* March 5-9. Dept. of CME, Box 91, MCV Sta., Richmond 23298.

29th Annual Postgraduate Program of the **Roanoke Memorial Hospital,** *Roanoke,* March 9-10. Charles L. Crockett, Jr., MD, Roanoke Memorial Hospitals, Belleview at Jefferson Street, Roanoke 24033.

Neonatal **Cardiology,** sponsored by Department of **Pediatrics,** University of Virginia School of Medicine, *Charlottesville,* March 16. Office of CME, Box 368, Charlottesville 22901.

April

Current Concepts in Clinical **Infectious Diseases,** sponsored by American College of Physicians, University of Virginia School of Medicine, *Charlottesville,* April 5–7. UVa-CME, Box 368, Charlottesville VA 22901, 804 924–5318.

The Team Approach to the Child with Myelomeningocele, sponsored by **Children's Rehabilitation** Center and Division of Continuing Education, UVa, Charlottesville, April 6. Anne Raynor, CRC Conference Coordinator, 804 924-5161.

Breast **Cancer** Symposium, presented by the Fairfax Hospital and American Cancer Society, Northern Virginia Area, Fairfax Hospital, *Falls Church,* April 6. J. Barry Newman, Fairfax Hospital, 3300 Gallows Road, Falls Church VA 22046.

Stroke: A Treatable Disorder, sponsored by the American Heart Association, Virginia Affiliate, Sheraton Motor Inn, *Fredericksburg,* April 14-15. Sue Franke, AHAVA, PO Box 12365, Richmond, VA 23241.

Hand Symposium, sponsored by Georgetown University, Hyatt Regency Hotel, *Washington, DC,* April 20-21. Norman J. Cowen, MD, 106 Irving Street, NW, Washington, DC 20010.

American College of Physicians **Hematology** Program, University of Virginia School of Medicine, *Charlottesville,* April 12–14. UVa-CME Program.

Genetic Counseling for Chromosomal Abnormalities, sponsored by Department of **Pediatrics,** University of Virginia School of Medicine, *Charlottesville,* April 19. UVa-CME Program.

Annual Lecture Series on **Surgery** of the Upper Extremity, sponsored by Divisions of Orthopedic and Plastic-Reconstructive Surgery, Medical College of Virginia, *Richmond,* April 20–22. MCV-CME.

A Day in **Endocrinology,** sponsored by Department of Internal Medicine, University of Virginia School of Medicine, *Charlottesville,* April 21. UVa-CME.

Vest Memorial Lectureship, sponsored by Department of **Urology,** University of Virginia School of Medicine, *Charlottesville,* April 27–28. UVa-CME.

17th Annual Swineford Allergy Conference, sponsored by Allergy Divison, University of Virginia School of Medicine, *Charlottesville,* April 28. UVa-CME.

Practical Advances in Diagnostic **Radiology** and **Nuclear Medicine**, sponsored by Johns Hopkins Medical Institutions, *Baltimore*, April 25-28. Program Coordinator, Turner Auditorium Room 22, 720 Rutland Avenue, Baltimore MD 21205.



"What are fears but voices airy? Whispering harm where harm is not."

Wordsworth

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PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

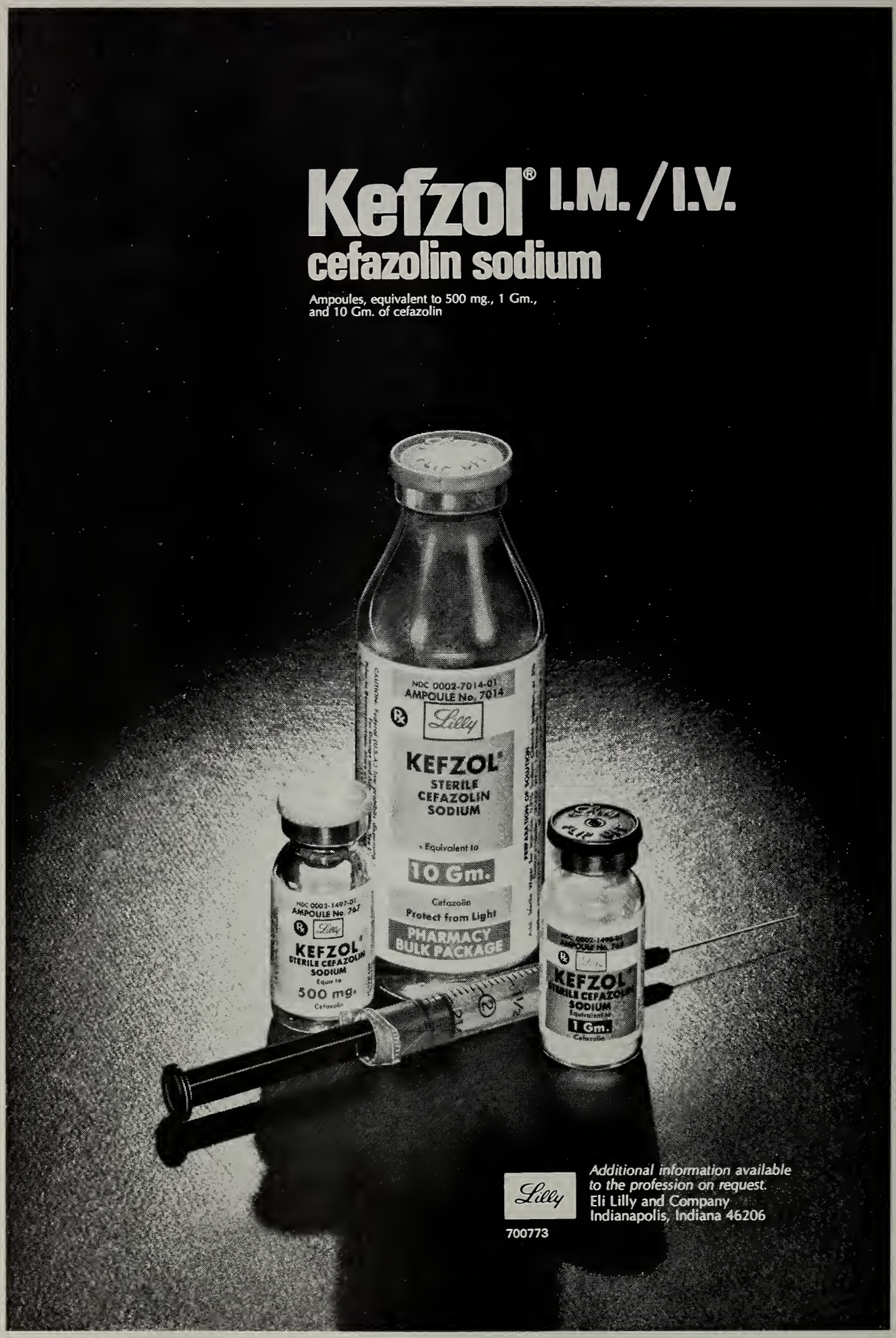
These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

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VIRGINIA MEDICAL
FEBRUARY 1978

Arthritis: An Ancient Disease Yields to Research

Charley J. Smyth, MD, *Denver, Colorado*

The author traces the history of arthritis, noting at least one instance when it affected the course of history, and describes the significant contributions to the understanding and treatment of the disease of the American Rheumatism Association and its Foundation.

ARTHRITIS originated in North America eons before the coming of man. Evidence of it has been found in the fossil vertebrae of dinosaurs of the Mesozoic era[1], and skeletons of the giant diplodocus that roamed this land during the age of reptiles show arthritic changes.

The earliest known human inhabitants of this continent also suffered from arthritis. In the cliff dwellings of Mesa Verde, in the Southwest, skeletons of early Indians were found showing the effects of osteoarthritis of the spine as well as ankylosing spondylitis (Fig. 1). Other Indian tribes are known to have used herbs to treat gout; an old Aztec remedy was wild morning glory.

Christopher Columbus may have suffered from a form of arthritis. "On his third crossing of the Atlantic in the caravel Nina in June 1498, after they had advanced within the tropics, the change of climate brought on the gout of all of his joints accompanied by a low fever." So records Dr. William Cokeman.[2] At about the same time Columbus suffered severe and painful attacks of eye inflammation, which is not uncommonly associated with both rheumatoid arthritis and Reiter's syndrome. Dr. Cokeman contin-

Dr. Smyth is Director of the Arthritis Treatment Center, General Rose Memorial Hospital, Denver, and Professor of Medicine Emeritus at the University of Colorado School of Medicine. Address him at 1050 Clermont Street, Denver CO 80220.

Presented in expanded form at the Symposium on Clinical Rheumatology for the Practicing Physician, Williamsburg, May 21, 1977.

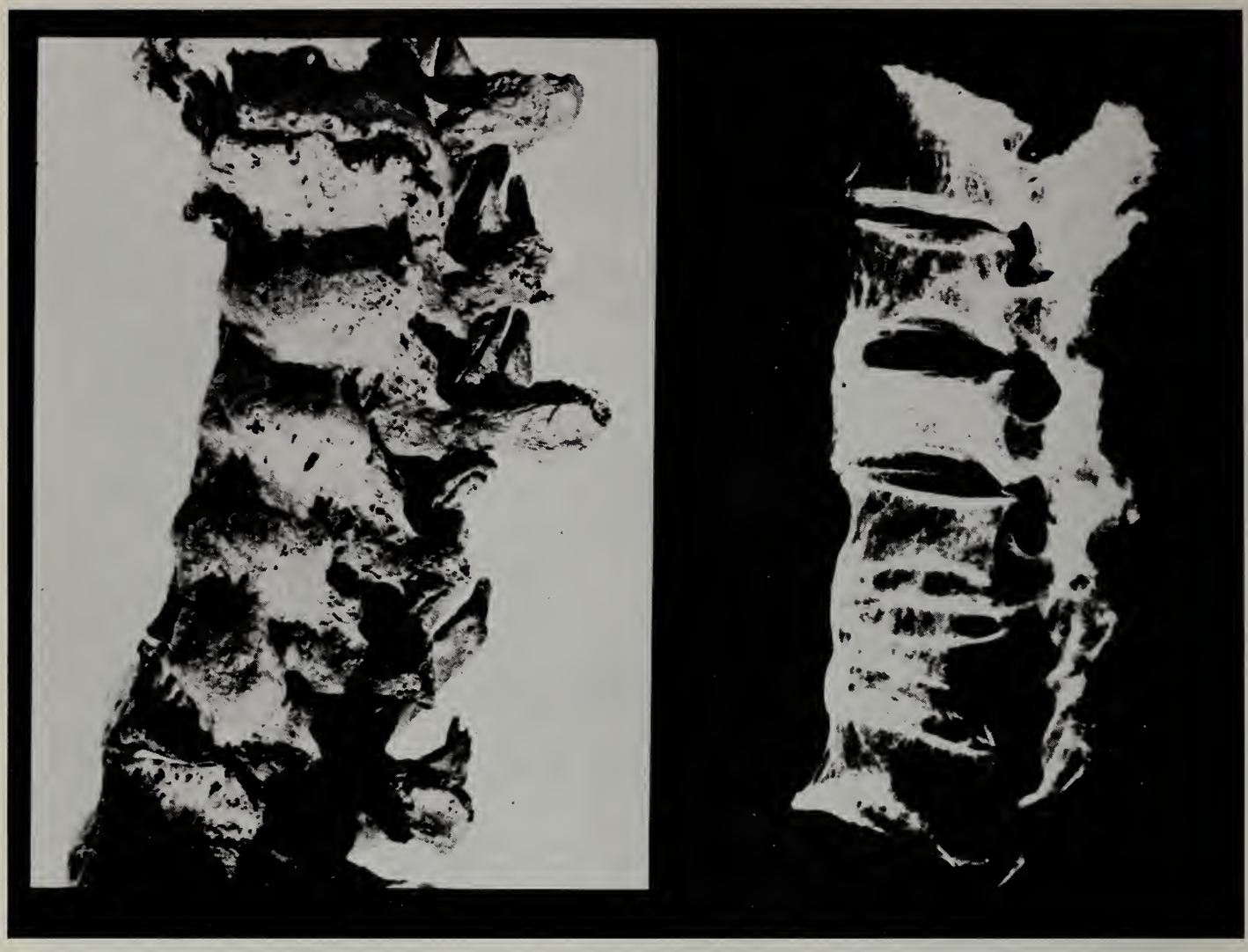


Fig. 1. From skeletons in the Mesa Verda museum, this spine showing arthritis due to ankylosing spondylitis. The x-ray changes are exactly those observed today.

ues: "In 1500, after a period of great mental stress and anxiety, all of his joints became constantly swollen and aching, and he had to be roped to the mast in bad weather that he might not be swept overboard . . . . he found himself too crippled to obey his monarch's summons to court that he might render an account of his exploits. He died in 1506 with great swelling of the legs and belly. . . ."

Hippocrates, in the 5th century BC, had recognized rheumatism (i.e., acute rheumatic fever) as different from gout; but this distinction was forgotten by his successors, and, during Columbus' lifetime and until the middle of the 16th century, all afflictions of the joints were regarded as gout. Varieties were identified according to the part affected: When a foot was involved, it was called *podagra*; *chiagra* if a hand; *gonagra* when a knee, and so on. In 1763 a Frenchman, Francois de Sauvages, published his *Nosologis Methodica,* which divided gout into 14 varieties.

The Hippocratic theory that gout and rheumatism were distinct entities was revived in the 1500's, and by the time of the American Revolution it was generally accepted that all arthritis was not gout. (It was not until 1776 that uric acid was identified by the Swedish apothecary, William Scheale.)

In the prologue to that Revolution, gout—or what was called gout—played a major role. William Pitt, prime minister to King George III, had recurrent spells of gouty arthritis from the age of 16 years; by the age of 40 he was largely incapacitated. During one of Pitt's prolonged attacks of gout that kept him away from Parliament, the members of that body passed the Stamp Act. Pitt succeeded in persuading the repeal of this inflammatory legislation; but later, in 1773, when an attack of gout again kept Pitt out of the way, Parliament passed a heavy colonial duty on tea. The result of this measure was the famous Boston Tea Party. A cartoon of the era shows King George in a carriage, his horses trampling the Magna Carta and the gouty Pitt hobbling behind on crutches (Fig. 2).

During colonial times, colchicine, which much earlier had been found effective treatment for gout, was not used in its therapy because the great Dr. Thomas

Syndenham had considered it a poison and opposed its use; as a result, it vanished for over 200 years. Today it is once again the drug of choice. Benjamin Franklin is often credited with the introduction of colchicine into the United States; in fact, there is convincing evidence that Franklin neither took colchicine for his gout nor arranged for its introduction on this side of the Atlantic.[3]

Although Franklin was often sick, gout is the disease most often associated with him. He first felt its twinges in 1749, when he was 43 years old, and thereafter to the end of his life he had frequent episodes: often a severe attack would incapacitate him for weeks. He wrote an immensely popular "Dialogue with My Gout," in which he treated his painful experiences with humor and philosophy.

Thomas Jefferson's doctors ascribed his severe backaches to rheumatism; they were said to have begun after heavy manual labor at Monticello, in which he was thought to have sustained back strain or a ruptured disc. He was in particular pain from repeated attacks during 1797, when he was Vice-President.

It probably was rheumatoid arthritis that so cruelly crippled James Madison, the United States' fourth President. His physician reported that it affected especially his arms and hands, but also his shoulders, wrists, and feet. When Madison retired to his estate in Montpelier, Virginia, his condition worsened. Ultimately, the arthritis crippled the fingers of his right hand so severely that his handwriting shrank to minute size and his food had to be cut for him. His affliction was widely known, and it is said he engaged a special secretary to deal with the flood of "cures" he received daily from all parts of the world.

AMERICANS have contributed surpassingly to the knowledge of arthritis during the last 50 years, these contributions made possible in large part by organizational support and emphasis. From beginnings early in the century, the American Rheumatism Association (ARA) and its fund-raising arm, the Arthritis Foundation, have become dynamically instrumental in fostering knowledge of this ancient disease and its treatment.

The Association's origins trace to 1913, when, at a medical meeting in Berlin, the idea of an international "League Against Rheumatism" was presented by a Dutch physician. After World War I, this League became an accomplished fact:[4] Committees



Fig. 2. A cartoon of 1775 showing King George III going over an embankment, while William Pitt, suffering from gout, hobbles behind on crutches.

Virginia physicians have led in the medical and orthopedic aspects of arthritis. The late Dr. Oscar Swineford, Jr., founded the fine Allergy and Arthritis Clinic at the University of Virginia, Charlottesville, and the pioneer work of Dr. William Tate Graham, a founder of the Crippled Children's Hospital, Richmond, is of first importance. Then there is Dr. Elam Toone, who is "Mr. Arthritis of Virginia"; as physician, teacher, and founder of the Arthritis Clinic at the Medical College of Virginia, Richmond, he is recognized nationally as a leader in the fight against arthritis.

Arthritis sufferers in Virginia and throughout the nation are indebted also to the late Dr. Charles W. Thomas of Floyd Courthouse, Virginia, whose will, in 1965, bequeathed one million dollars to Virginia Commonwealth University to support studies of the cause and cure of arthritis.

were formed in several countries, scientific meetings were held, and a journal, *Acta Rheumatologica,* began publication. In 1928 an American Committee for the Study and Control of Rheumatism was founded as a component of the League. This was the start of organized rheumatology in the United States.

The first scientific session sponsored by this Committee was held in New Orleans in 1932. Many of the topics discussed at that meeting are timely today, for example, "Treatment with Desensitization" and "Vaccine Therapy for Chronic Arthritis."

The Committee's name was changed, in 1938, to the American Rheumatism Association. At its first meeting after World War II, a group of members was charged with organizing lay and medical persons to raise funds for the Association's objectives. This was accomplished in short order. The Foundation was incorporated in the state of New York in 1948, and the first campaign for funds yielded $262,000. A grant of $50,000 from this total financed an international congress in New York City, which brought together physicians and scientists from 32 countries; they heard the scientific paper announcing the amazing effects of cortisone on rheumatoid arthritis, a bombshell that focussed the attention of the world on arthritis research.

At the same time that the Foundation was coming into being, three other American organizations devoted to arthritis research were persuaded to come under the unbrella of the Association, strengthening its work and creating cohesive goals.

The contributions of the Association and the Foundation in the past 25 years are incalculable. The fellowship program has grown steadily until, in 1974, it made 50 awards totalling $644,000. There are now 42 clinical research centers supported by Foundation money. An educational program has provided many publications to physicians, allied professionals, and patients: the *Primer,* begun in 1932, has had new editions at five-year intervals; the renowned *Rheumatism Reviews,* started in the same year, have been published frequently; physicians have been kept abreast of research with the *Bulletin on Rheumatic Diseases*; and the Association's journal, *Arthritis and Rheumatism,* established in 1958, now has a worldwide circulation.

It was due to testimony in Washington by directors of the Foundation that Congress created in 1949 the Institute of Arthritis and Metabolic Diseases, within the National Institutes of Health in Bethesda, Maryland. This Institute, aided by the ARA and the Foundation, has been a major factor in raising rheumatology to a specialty of stature; adding "rheumatology" and "rheumatologist" to the language; and establishing a national Board to certify physicians as rheumatologists.

With Foundation support, laboratory research in the United States has expanded to encompass problems related to tissue structure, cell ultrastructure, biochemical and metabolic studies, and genetic investigations. Sophisticated techniques of immunology have been applied to analyzing the underlying mechanisms responsible for inflammation of the joints.

Patients have benefited distinctly from this research. The prevalence of infectious arthritis has been reduced greatly. Rheumatic fever can now be prevented and gout controlled. Important improvement has been brought to the management of rheumatoid arthritis and systemic lupus erythematosus. Advances in orthopedic reconstructive surgery are impressive, with artificial joints for hips, knees, fingers, ankles, elbows, and shoulders.

There is still much to be done, and the Association and the foundation will continue to lead in that work.

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The Interrelationship of Cataract and Glaucoma

Khalid J. Awan, MD, *Norton, Virginia*

The physician who attributes visual loss to presenting cataract is warned to search for signs of glaucoma as well. The two conditions often coexist, and if the glaucoma is overlooked, eyesight may be irreversibly lost.

CATARACT AND GLAUCOMA are the two leading causes of blindness. However, it is important to know that the visual loss from cataract is temporary and reversible, whereas the chances of recovering the vision lost because of glaucoma are nil. Early diagnosis and an efficient control of glaucoma are essential for the safety of sight. The occurrence of cataract and glaucoma together is one of the most treacherous situations in ophthalmic practice. The presence of cataract makes the management and prognostic evaluation of glaucoma significantly more difficult. A physician who is not well experienced in the field of ophthalmology may attribute the visual loss to cataract and hence may significantly delay the diagnosis of coexistent glaucoma by not referring the patient to an ophthalmologist in time. The problem is compounded by the fact that in many instances either cataract or glaucoma can lead to the development of the other. Some aspects of the interrelationship of cataract and glaucoma are here discussed.

Glaucoma and cataract are sometimes the parts of a congenital syndrome, such as Lowe's syndrome or congenital rubella. In chronic inflammatory conditions of the eye both cataract and glaucoma may develop. In heterochromic cyclitis of Fuchs (a quiet type of anterior uveitis with little ciliary congestion and without discomfort or pain), cataract and simple glaucoma are common complications. In some cases of heterochromic cyclitis, the cataract extraction may cure the glaucoma. The "glaukomflecken" are small white opacities immediately in or under the anterior lens capsule, which develop subsequent to an acute attack of angle-closure glaucoma and are considered positive evidence of a previous episode of an acute rise in the intraocular pressure.[1] The term "glaucomatous cataract" is applied to the opacification of lens due to disturbance of nutrition and degenerative changes in a blind eye with absolute glaucoma. The loss of direct pupillary reaction to light and elevated intraocular tension are diagnostic signs of absolute glaucoma in a blind and painful eye. It is better to have such eyes removed, because 10% of these have been found to have an unsuspected malignant melanoma of the uveal tract.[2] The miotics used in the therapy of glaucoma or the filtering procedures may also lead to the formation or progression of cataracts.

Glaucoma secondary to changes in the crystalline lens results from alterations in its shape, displacement from its natural position, or cataract. Microphakia (or sherophakia), a bilateral congenital condition found in Marfan and Marchesani syndromes, may be associated with glaucoma due to the spherical lens blocking the pupillary aperture. This type of glaucoma and all other types of pupillary-block glaucoma are treated by mydriatics and not miotics, for the use of miotics may precipitate an acute attack of raised intraocular pressure, called "inverse glaucoma". The associated congenital anomalies of the filteration angle in these syndromes may also be the additional factors in the development

From the Norton Community Hospital, Norton, Virginia. Address Dr. Awan at 100 Fifteenth Street, Norton VA 24273.

Submitted 11-30-76.

of glaucoma. The displacement of the lens may be posterior into the vitreous, or anterior. The anterior dislocation is usually followed by acute glaucoma. The dislocation of the lens may be spontaneous, as in Marfan and Marchesani syndromes, and homocyctiuria, or traumatic. In cases of traumatic posterior dislocation of the lens the associated glaucoma is usually the result of trauma to the anterior chamber angle structures or ocular inflammation. In addition to being associated occasionally with chronic open-angle glaucoma, the cataractous changes in the lens may lead to secondary glaucoma in several ways.

A rapid swelling of the lens in the intumescent cataract of old age or in traumatic cataract may push the iris forward and block the filteration angle with resultant angle-closure glaucoma. The same may happen following discission of congenital cataract. An acute attack of angle-closure glaucoma due to the rapid swelling of the cataract is more likely in patients with narrow anterior chambers.

Case 1.

A 52-year-old white female was seen with painful, red left eye. She had noticed blurring of vision and aching in the eye on a few occasions in the past but these cleared up spontaneously. The present attack developed gradually until the eye became red and painful. She was treated by her physicain for conjunctivitis but it did not help and the eye became "blind". This brought her to my office. The eye appeared to have suffered a typical attack of closed-angle glaucoma. External examination showed eechymosis of the upper eyelid (Fig 1), but the patient strongly denied any history of recent trauma. The eye was congested. Cornea was slightly hazy and permitted a satisfactory view of the anterior segment structures. The pupil was semidilated and fixed. Biomicroscopy showed that anteroposterior thickness of the lens was greater than in the other eye; also, it had moderate cortical cataractous changes. The anterior chamber of the right eye was shallow and the angle of the left eye was closed.

The diagnosis of closed-angle glaucoma with intumescent cataract was made and immediate treatment with miotics and carbonic anhyderase inhibitors was started. Pilocarpine 1% drops were also started prophylactically in the right eye. Next day an intracapsular cataract extraction with peripheral iridectomy was performed on the left eye and was followed by peripheral iridectomy in the right eye in another six days. At present the patient is symptom free and the intraocular pressure is normal in both eyes. Her vision is 20/40 OD and 20/30+ OS with proper glasses.

Comment. Any patient with red eye and pupillary changes should be referred to an ophthalmologist. A small and sluggish pupil indicates an anterior uveitis; a large fixed pupil is suggestive of an acute attack of glaucoma. A normal anterior chamber depth in one eye and shallowness in the other may be an indication of intumescent cataract in the eye with shallow anterior chamber. The ecchymosis of the upper eyelid in the above patient is very unusual and has not been previously described in cases of acute angle-course glaucoma. This may create confusion in the differential diagnosis of acute glaucoma and ocular trauma.

If the cataract is not removed when it reaches the stage of maturity, it may become hypermature and lead to several serious complications, including secondary glaucoma. The lenticular proteins may escape from the capsule of a hypermature cataract and induce severe inflammation in the eye. The lens proteins released into the eye by the rupture of the lens capsule by trauma or by surgery, and in rare instances from spontaneous rupture of the lens capsule, may cause violent generalized inflammation of the uveal tract from autosensitivity to lens proteins. The inflammation is most severe around the lens matter and is called phacoanaphylactic endophthalmitis. Unless capsular rupture occurs in both eyes, this condition is unilateral.

Another type of less well-defined reaction which is due to toxicity of the lenticular proteins rather than hypersensitivity is called phacotoxic uveitis. In contrast to phacoanaphylactic endophthalmitis, which is a focal granulomatous reaction, phacotoxic uveitis is characterized by a nongranulomatous inflammation. A similar lens-induced uveitis can develop in the unoperated or uninjured eye with a cataract following an operation or trauma involving the lens of the other eye. Cases have been reported in which one eye had phacoanaphylactic uveitis and the other the typical changes of sympathetic ophthalmitis.[3] All of these

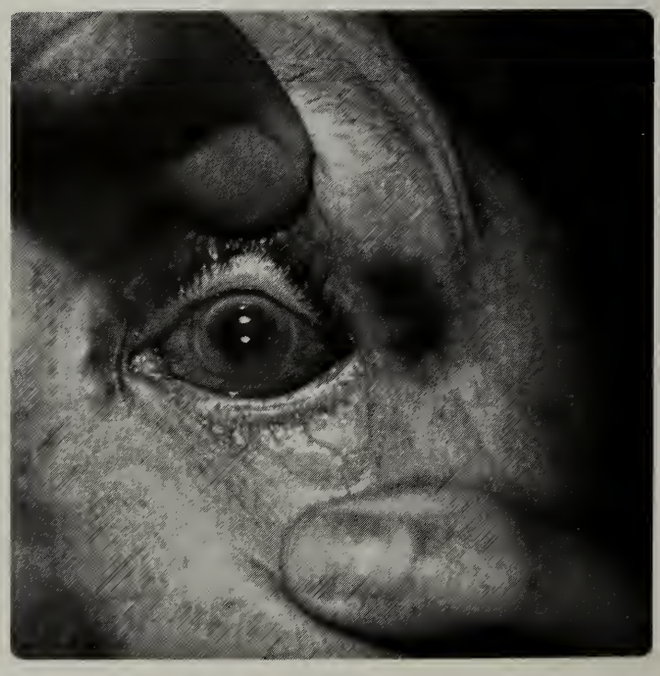


Fig. 1. Acute attack of glaucoma presumably due to intumescent cataract. Note semidilated fixed pupil. Ecchymosis of upper eyelid is unusual.





Fig. 2 (left). Left eye with phacolytic glaucoma. Note milky appearance of anterior chamber due to release of lens material in aqueous. Fig. 3 (right). Eye in Fig. 2 immediately after cataract removal.

types of lens-induced inflammatory processes are frequently accompanied by secondary glaucoma.

Phacolytic or phacogenic glaucoma is another interesting aspect of the relationship between cataract and glaucoma. It occurs in eyes with hypermature cataracts. Liquified and denatured proteins leak out of a generally intact but thinned lens capsule into the aqueous. These denatured proteins are believed to be unable to cause an antigen-antibody reaction and incite only a macrophagic response.[4] The phacoanaphylactic endophthalmitis is caused by relatively normal lenticular proteins. The macrophages engulf the denatured proteins from the aqueous and then block the filteration channels of a normally open angle of the anterior chamber. This leads to gradual elevation of the intraocular pressure resulting in phacolytic glaucoma. The only effective management in such cases is the removal of cataract and irrigation of the anterior chamber before the glaucoma causes any permanent damage to sight.

Case 2.

A 78-year-old white male was seen with complaint of redness and pain in the left eye for four days. Ten years previously he had been advised to have cataract extraction in that eye but refused because the vision was good in the other eye. The right eye was normal with early cataractous changes and some pigmentary changes in the macula. The vision was 20/40 in the right eye, with a doubtful light perception in the left. The left eye was congested with slight edema of the cornea. The intraocular pressure was 15 mmHg in OD and 45 mm Hg in OS. The slit lamp examination showed a deep anterior chamber with large keratic precipitates and and slight cloudiness of the aqueous. There also was a hypermature cataract with slight wrinkles in the lens capsule. The patient was admitted to the hospital with diagnosis of phacolytic glaucoma. Medical treatment brought the intraocular pressure down to almost normal. The patient felt comfortable and cataract extraction was scheduled for the next afternoon. The next morning the patient complained of sudden excruciating pain in the left eye. On examination the anterior chamber was found to be full of milky material behind a slightly edematous cornea (Fig 2). The intraocular pressure was 65 mm Hg. An emergency extraction of the cataract was performed without any complications. It is interesting that a grossly visible rupture of the lens capsule with a flattened nucleus trapped in it was found after entery into the anterior chamber. At the conclusion of the operation the cornea and anterior chamber were clear, allowing a sharp view of the iris details (Fig 3). The postoperative course was uneventful and final visual acuity was 20/50 with glasses.

Comment. The sudden rise of intraocular pressure in this patient probably was a result of the spontaneous capsular rupture. The initial decrease in the intraocular pressure was achieved by the use of osmotic agents. It is possible that the rehydration of the vitreous in the early hours of the morning caused it to push against the cataract and produce a rupture in the fragile lens capsule. The spontaneous rupture of the lens capsule may also occur in cases of lenticonus and ocular inflammations. It is wise to consider the removal of a hypermature cataract as a prophylatic measure against complications if not for visual purposes. The above case demonstrates the significance of such an approach.

Finally, a few words about pseudo-exfoliation syndrome might be of practical value. The syndrome is characterized by the deposition of white, fluffy mate-

rial on the lens capsule, the zonules, the ciliary epithelium, the iris pigment epithelium, the trabacular meshwork and the conjunctival blood vessels. Clinically, there is a peripheral broad ring of whitish dust-like deposits on the anterior lens surface; less often a central disc, separated from the peripheral band by a clear zone, is also present. These deposits are seen best after the dilatation of the pupil (Fig 4). Powdery, flaky deposits of this material may also be found on the pupillary border. A high percentage of patients with pseudo-exfoliation syndrome also has either chronic simple glaucoma or secondary glaucoma with open angles, which is sometimes called glaucoma capsulare. Treatment of glaucoma in pseudo-exfoliation syndrome is similar to chronic open-angle glaucoma.

Summary

The visual loss in a patient with cataract might actually be due to a coexistent glaucoma. This significant interrelationship of cataract and glaucoma is discussed. A thorough ophthalmic evaluation is mandatory in every case of cataract.

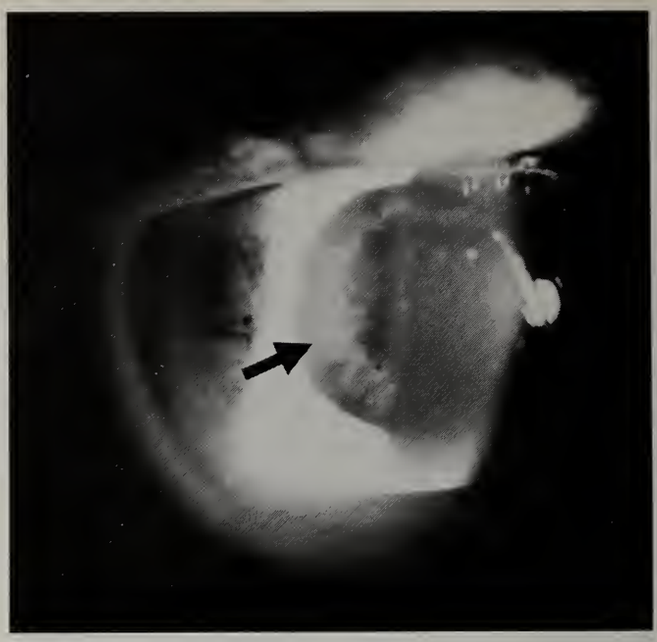
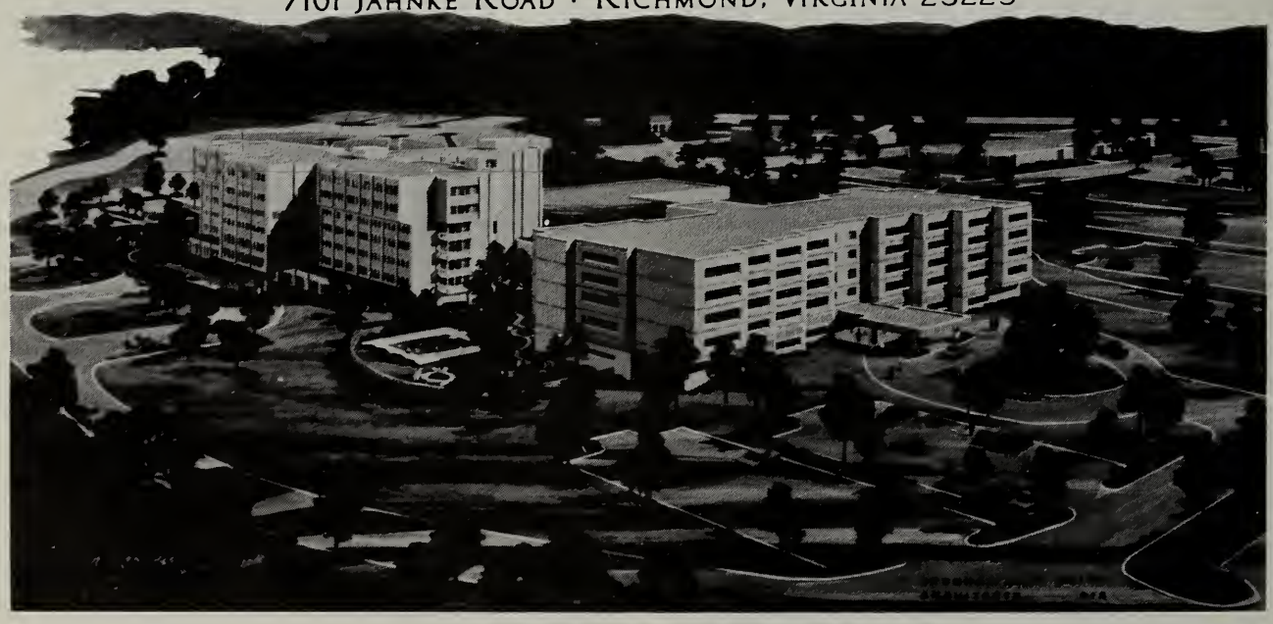


Fig. 4. Ring-shaped deposit of white powdery material on anterior lens capsule (arrow) in pseudo-exfoliation syndrome. Patient also had glaucoma capsulare.

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Of the many books on writing, there are two the Editors find of particular merit. One is *The Elements of Style,* by William Strunk, Jr., and E. B. White (MacMillan, softcover $1.65). This extraordinary little book, first published in the 50's, is a national primer. The other, a recent entry, is *On Writing Well,* by William Zinsser (Harper & Row, softcover $4.95). This is a lengthier volume, but it is still a quick study, and a valuable one. Both of these books are a joy to read; the authors practice what they preach, and their writing is clear and vigorous. The principles they offer are easy to grasp; all are illustrated vividly (and often amusingly) with before-and-after or right-and-wrong examples. Treat yourself to one or both of these books. You'll be glad you did.

ADVICE TO AUTHORS

Febrile Morbidity Following Vaginal Hysterectomy

Bertram L. Warren, Jr., MD, *Virginia Beach, Virginia*

The author suggests that each gynecological service determine the incidence of febrile morbidity before adopting routine use of prophylactic antibiotics or vaginal cuff suction drainage.

SINCE THE INCIDENCE of febrile morbidity following vaginal hysterectomy has been reported as high as 50%[1-4], there has been considerable effort to reduce this figure. Modification of vaginal cuff closure, administration of prophylactic antibiotics and postoperative suction drainage of the retroperitoneal space have all been suggested.[5-10]

Febrile morbidity in a community hospital does not seem to be of the magnitude previously reported, which prompted this review.

Materials and Methods

Records of 100 consecutive patients undergoing vaginal hysterectomy between June 1972 and October 1975 were reviewed. Preoperative preparation consisted of povidone-iodine douching and painting of the vagina the night before surgery with the painting repeated in the operating room. No prophylactic antibiotics were employed. Preoperative catheterization was not done.

The vaginal cuff was left open in all cases using a modification of the method described by Thompson and Lyon.[11] No drains were routinely employed although iodoform gauze packing was occasionally used with associated repairs.

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Submitted 10-21-76.

Results

Tables 1 and 2 indicate the age range, surgical indications and procedures performed in the study group. The incidence of febrile morbidity is included in Table 2.

The standard definition of febrile morbidity, i.e., temperature greater than 100.4F on any two postoperative days excluding the first 24 hours, was used in this study. Nine patients exhibited febrile morbidity and the incidence was not increased with associated procedures. Uterine morcellation was carried out in five patients without febrile morbidity. Eight of the nine febrile patients were under age 50, which paralleled the overall incidence of this age in the study group.

Overall morbidity is represented in Table 3. Four patients with urinary tract infection also exhibited

Table 1. Profile of Study Group with Indications for Surgery

Number of patients	100
Age range	25–78
Under age 50 years	87
Primary Indication Surgery:	
Recurrent menometrorrhagia	32
Symptomatic pelvic relaxation	26
Voluntary sterilization	21
Severe dysplasia/carcinoma-in-situ cervix	11
Leiomyomata	9
Adenocarcinoma of endometrium	1

Table 2. Surgical Procedures and Febrile Morbidity in Study Group

Procedure	Patients	Number with Febrile Morbidity
Vaginal hysterectomy only	62	6
With anterior and/or posterior repair	26	2
With conization/frozen section	10	1
With excision urethral diverticulum	1	0
With bilateral salpingo-oophorectomy	1	0
Total	100	9%

febrile morbidity. None of the patients readmitted for postoperative bleeding required transfusion and three were controlled with vaginal packing only. Length of hospital stay was increased an average of one day by febrile morbidity with or without associated repairs.

Discussion

The use of prophylactic antibiotics and/or suction drainage of the vaginal cuff have reportedly drastically reduced the incidence of postoperative febrile morbidity. Before the routine use of these measures is adopted, however, with potential risk of emergent resistant organisms, patient drug sensitivity and increased cost, it is advisable to determine the severity of the problem in each institution.

Increased incidence of febrile morbidity in indigent patients and resident training programs has been noted in the past[12], and would appear to be a significant factor in its occurrence. Increased operating time with subsequent blood loss is well known to predispose to infection, and postoperative complications of all varieties are certainly more prevalent in lower social economic groups. It is probable that the vast majority of studies on febrile morbidity have taken place in teaching institutions, which rarely reflect the patient population in a private practice. The use of prophylactic antibiotics and/or suction drainage of the vaginal cuff may be best suited to these institutions on a routine basis.

Conclusion

The present study in a group of private gynecologic patients undergoing vaginal hysterectomy presents an acceptable incidence of febrile morbidity employing open cuff closure only. The need for routine use of prophylactic antibiotics and/or suction drainage of the vaginal cuff should be determined in each institution after the incidence and severity of febrile morbidity is established.

Table 3. Overall Morbidity in Study Group

Febrile morbidity	9
Urinary tract infection	14
Readmission postoperative bleeding	4
Bladder laceration	1
Pelvic abscess	0

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SOSSUS: Definitive Study of American Surgery

William Levi Old, Jr., MD, *Norfolk, Virginia*

"This exhaustive analysis of surgical care has implications for all surgeons. Let us exert every effort to see that it is implemented, for the improvement of the profession and the betterment of the patient."

THE AMERICAN SURGICAL ASSOCIATION, founded in 1881 by Samuel D. Gross, MD, as the major organization of the academic surgeon, had a committee on issues in the late 1960's. The American College of Surgeons, founded in 1913 by Franklin H. Martin, MD, as the major organization for all surgeons, had a committee on surgical care in the late 1960's. These two groups joined forces in 1970, obtained advice and financing from other institutions, notably the United States government, and together undertook a "Study on Surgical Services for the United States" (SOSSUS).

The resulting five-year-long, $1.5-million examination of the surgical profession, conducted by ten subcommittees of physicians and supporting personnel from both university and community, evaluated current conditions in ten areas: academic surgical manpower; surgical manpower; allied surgical manpower; organization, delivery, and financing of surgical services; legal and ethical issues in surgery; community-physician relations; intraprofessional relations; surgical research; quality of surgical care; and government relations.

The 200-page *Summary of SOSSUS,* which appeared in 1975 and was followed by the massive complete report, presents an awesome amount of carefully documented factual data. It is said, with some reason, to be the most exhaustive analysis of surgery or of any other profession ever undertaken. This virtually all-inclusive study of the delivery of surgical care in the United States—its quality, its providers, and its costs—raises a number of questions, provides some answers, and has many implications for surgeons throughout the country.

In respect to **academic surgical manpower,** the study concludes that because of increasing medical student and resident enrollments, the scope of academic responsibility is increasing even as federal support for research is decreasing and research productivity consequently falling. Academic surgeons, who teach all medical students in addition to performing research and caring for patients, are seldom adequately recompensed, a fact reflected in the growing number of unfilled academic positions in departments of surgery around the country. Recommendations are threefold: that a national health care policy be worked out jointly by professional agencies; that a stable national policy for biomedical research and training be established; and that the National Institutes of Health declare a critical shortage of academic surgical personnel and actively support programs for the education of surgical scholars.

Physicians are especially urged to read the section on **surgical manpower** for the light it sheds on the major problems of surgical personnel in this country. More than 50 charts, diagrams, and tables illustrate the discussions and findings relating to such issues as operative workloads, relative incidence of certain surgical procedures, relative income in various medical and surgical situations, surgical residencies, and foreign medical graduates, plus many others. A major conclusion is that while the number of Board-certified surgeons (54,000) is adequate, the number of physicians actually performing surgery (94,000) is ex-

cessive. It is recommended that the present 2,500-3,000 surgical residencies be reduced to approximately 2,000, with any future expansion held to the general population growth rate. Further recommendations include stricter requirements for hospital credentials, as well as periodic reassessment of fitness, competence, and performance.

The rapid increase in medical knowledge and technology has led to an unprecedented proliferation of **allied health services and occupations;** at present there are some 125 major categorized occupations, with approximately 250 recognized designations. The individual surgeon, unable to provide alone such a vast array of services, has become the leader of a complex team of other physicians, nonphysician professionals, and technical and clerical support personnel. The field is still evolving; needed are uniform definitions of categories of health workers, more effective accreditation, better distribution of services, and a delivery system based upon patient needs, types of service required, and optimal use of facilities.

The study of the **organization, delivery, and financing of surgical services** reveals that more effective and efficient patterns are emerging in the United States, especially trends toward more single and multispecialty groups, more frequent location of offices near hospitals, regionalization, increase in ambulant surgery, and use of non-MD personnel for some routine tasks. Increasing public scrutiny of the high cost of hospitalization and surgical care and physician income in general is noted, with an analysis of the possible effects of ignoring such aspects of a consumer society.

A wide range of **legal and ethical issues in surgery,** including abortion, professional liability and malpractice, time of death, and a number of other questions, was studied by the subcommittee for this section of SOSSUS, and a number of principles enumerated. Their findings shed no new light on the all too familiar malpractice insurance problem. Recommendation is made for better control of the legal risk inherent in the expanded use of auxiliary health personnel. Both human experimentation and organ transplantation under rigorous control are approved.

The subcommittee studying **community-physician relationships** had the goal of evaluating three aspects of the subject: the surgeon's societal responsibilities; present and projected behavioral patterns of surgeon and patient; and alternative plans for enhancing positive relations involving surgeon, community, and patient. On the whole, relations were found to be harmonious, although conflicts do occur. Some of the current controversial issues discussed in the report are comprehensive health planning, the designation of hospitals for care of patients with categorical diseases, a patient's bill of rights (also responsibilities), open-versus-closed hospital staff, status of full-time salaried surgical staffs in nonteaching hospitals, and community representation in health care agencies. Nine sensitive "influence points" with great potential for fostering positive surgeon-community relations are discussed, including goals, attitudes, standards, authority, and communications.

The review of **intraprofessional relations** probes in some depth the questions of specialization, status of osteopathy, anesthesiology (including nurse anesthetists), and nursing. The contribution of the specialty board system to the present high level of health care is recognized, but the need for central planning and control is noted. It is hoped that such agencies as the American Board of Medical Specialties and similar bodies will provide the necessary leadership on a voluntary, self-disciplined basis. Osteopathy is seen as a growing movement, providing at present nearly 2% of trained surgical personnel. A common accrediting agency with uniform standards is thought to offer a possible means of resolving any problems between the two disciplines. A shortage of anesthetists, the desirability of more physician-anesthesiologists, and the necessity of a more positive attitude toward the nurse-anesthetist are major problems in this field.

The need for establishing a means of improved communication between members of the nursing and medical professions, at both institutional and national levels, is recognized as most important; and surgeons are reminded of their duty to provide a degree of personal and professional support in keeping with the importance of the nurse's role in the care of the sick.

Sixty-four important contributions in **surgical research,** 1945-1970, and the diseases they have affected are identified. The resulting improved therapy and better prognosis have helped to save untold thousands of lives and to increase life expectancy. In 1970 alone there was a 60-fold return on research funding, resulting in a net saving of $2.8 billion in this year. However, since the mid-1960's there has been a significant reduction in support for biomedical research. It is urged that the legislative and executive branches of government as well as public and private agencies responsible for the allocation of funds for research be made fully aware of the dangers of allowing such study to decline. Thirteen points worthy of careful thought are made in this respect, underlining the premise that surgical research is a national resource of immense importance requiring consistent continuing support from the federal government.

The study of the **quality of surgical care,** begun before Professional Standards Review Organizations

were created, is not yet complete. In this continuing review the goals are two-fold: first, to determine on a sample basis what percentage of surgical and life-threatening complications are judged preventable, and, second, if judged preventable, to determine whether they are related to stage of disease or to deficiencies in surgeon, hospital, or community resources. At the present time, 122 hospitals, with combined general short-term admission of 1,363,573 patients annually, are participating in the project. It is hoped the study may prove to offer a practical method of evaluating surgeon and hospital licensure, certification, and accreditation. The ultimate impact of the new federal requirements, as yet unclear, promises to be great.

The concluding segment of SOSSUS treats **relations with the federal government,** both funding and controls. Controls have extended and tightened as funding has increased; the indirect effect of the funding power is incalculable. The trend is especially visible in research. The representation of the medical profession in legislation at present is seen as poorly organized and largely ineffective. Possible "entry points" to legislation and to financial appropriations are suggested.

In view of the tendency toward spreading government controls, physicians must act. They should study this section of SOSSUS carefully and attempt to influence legislation and funding for health care and health-related education directly or indirectly, since only such action by health professionals can prevent, in the words of Justice Brandeis, the dangers of "the insidious encroachment by men of zeal, well-meaning but without understanding."

The American College of Surgeons, in addition to other groups, has begun to institute some of the changes advocated by the SOSSUS report. The chief of surgery at every hospital in Virginia is urged to familiarize himself and the executive committee of his medical staff with SOSSUS so that the appropriate suggestions for improvement in surgical care may be carried out systematically and effectively.

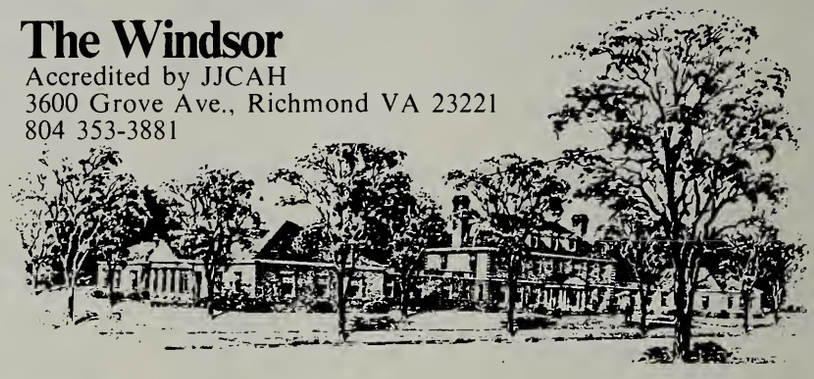
SOSSUS could well have major influence on American surgery. Let us not allow it to fall into oblivion but instead exert every effort to see that it is implemented for the improvement of the profession and the betterment of the surgical patient. ■

"Surgery in the United States: a Summary Report of the Study on Surgical Services in the United States" is available in paperback for $5 from the American College of Surgeons, 55 East Erie Street, Chicago IL 60011.



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Carcinoma of the Lung: The View Today

Joseph M. Deignan, MD, *Winchester, Virginia*

"It has been clearly demonstrated, world wide, that the lung cancer epidemic is a consequence of cigarette smoking. This applies to both sexes and all races."

CANCER of the lung needs no introduction. The Western world has been suffering from an epidemic of lung cancer for the last 30-40 years.

In Virginia alone approximately 2,000 persons died of lung cancer last year. It is estimated that over 90,000 new cases will be reported in the United States in 1977. And while lung cancer once was considered a disease of men, recent statistics show an increased incidence in women, so that the present sex ratio is 3:1, males to females.[1]

Etiology

It has been clearly demonstrated, world wide, that the lung cancer epidemic is a consequence of cigarette smoking. This applies to both sexes and all races. Countless epidemiologic studies have addressed this problem; the condemnation of cigarette smoking has been consistent to the point of monotony. It may come as a surprise that Scotland, England, Luxembourg, and several other European countries have higher incidences of lung cancer than the US, but the cause is the same. Of course, when one examines the constituents of cigarette pyrolysis, numerous hydrocarbons and nitrosamines are identified; most of these compounds have already been identified as carcinogens or cocarcinogens.

Very simply, cigarettes are probably the only available product that, when used according to the manufacturers' directions, will result in about 250,000 premature deaths per year in the United States. About 80,000 of these deaths are from lung cancer, and most of the remainder from cardiovascular disease and emphysema. Certainly any other food or drug with a similar record or chemical composition would have been banned by any concerned government long ago.

It is true that some industrial pollutants such as asbestos, radioactive materials, chrome, nickel, etc., have also been incriminated as causes of lung cancer. Careful analysis of these pollutants, however, usually show that it is the cigarette smoker, working in these industries, who is the prime victim.

Clinical Presentation

The lung cancer found on an incidental chest x-ray, or the situation of a patient with malignant cells in his sputum plus a normal chest x-ray, are modes of presentation with the most favorable prognosis. Mass screening techniques for persons at high risk for developing lung cancer are presently being investigated both at Johns Hopkins and the Mayo Clinic.[2,3] In the past, mass screening projects have been notoriously unsuccessful in finding early *curable* lung cancers.

Classically, when the patient complains of hemoptysis, chest wall pain, dyspnea, cough, weight

Presented in part at the Annual Meeting of The Medical Society of Virginia, Richmond, October 15, 1977.

Sponsored by the Professional Education Committee, Virginia Division, American Cancer Society.

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loss, recurrent pneumonia, hoarseness, bone pain, etc., very advanced lesions are usually found. Indeed, about 75% of patients, when they present to their doctor, already have an incurable lung cancer.

The chest x-ray is the most valuable tool in the diagnosis and staging of lung cancer. Unexplained peripheral lung nodules or infiltrates, a prominent lung hilum or mediastinum, or pleural effusion should all raise the suspicion of lung cancer in a smoking person over 35 years of age. Any lung mass associated with pneumonia or pre-existing tuberculosis, whether or not it is cavitated, is suspect.

It is not unusual for a patient's first complaint to be of a systemic nature, which may include arthritis, myalgias, weakness, and syncope. In these situations, investigators have sometimes demonstrated Cushing's syndrome, inappropriate secretion of antidiuretic hormone, and other endocrine abnormalities apparently caused by hormone-secreting lung cancers. Small cell (oat cell) and squamous cell carcinomas are the most notorious hormone-producing malignancies.

Pathology

Basically, there are five different histologic types of carcinoma of the lung:

Epidermoid (squamous cell)	40%
Adenocarcinoma	20%
Small cell (oat cell) undifferentiated	18%
Large cell undifferentiated	17%
Alveolar cell (bronchioalveolar)	5%

This classification is of some practical significance and will be discussed in relationship to prognosis.

Diagnosis and Staging

All of the more sophisticated chest clinics are now reporting from 50-80% of their diagnoses of lung cancer on the basis of cytologic studies.[4,5] The Mayo and Hopkins groups are using three-day pooled sputum collections. Tremendous success rates are reported by bronchoscopists using the newer, flexible fiberoptic instruments, which permit a more thorough, direct inspection of the tracheobronchial tree out to the secondary and tertiary segmental bronchi. Bronchial brush biopsies and washings collected through these instruments are very rewarding.[2,3]

Thin-bore needle aspiration of palpable metastatic masses in the neck or chest wall give a high yield of accurate cytologic diagnosis, with minimal discomfort and cost to the patient. In selected cases, usually with the assistance of floroscopy and image intensifier, needle-aspiration lung biopsies will give enough tissue for diagnosis; in most practices this technique is reserved for the patient who is not a candidate for thoracotomy.

Mediastinoscopy, either through a cervical or parasternal incision, has revolutionized the preoperative evaluation of lung-cancer patients. It is now well established that any patient with positive mediastinal nodes, confirmed by biopsy and regardless of cell type, has the same poor prognosis as a patient with distant metastasis. There are a few small series and case reports to the contrary, but they are few indeed when one considers many attempts to defy this observation.

Weiss and Gillick recently made in Philadelphia an autopsy study on 125 men who died between 1956 and 1965 following attempts at curative resection for lung cancer. Residual disease or metastasis were found in 86 patients (69%).[6] It is hoped that, with the advent of mediastinoscopy and radioisotope scans of the brain and skeleton, fewer patients in this decade are being subjected to unnecessary thoracotomy.

The American Joint Committee for Cancer Staging and End Results Reporting published its guide to the clinical staging of carcinoma of the lung in 1973.[6] A summary of this classification is presented here separately.

Surgery

Primary resection of a Stage I or II cancer of the lung gives the patient his best chance for cure. When staging is thoroughly performed, and after the surgeon has eliminated the patients with inadequate cardiopulmonary reserve, no more than 20% of those with cancer of the lung will undergo thoracotomy. Of this group, however, about 90% will have a good chance at curative resection of their carcinoma. The preferred resection is the one which will conserve the most functional lung tissue without compromising surgical margins.

At this time, lobectomy with lymph-node excision is the preferred resection for most Stage I lesions, and these are usually performed with a 5-10% operative mortality. Many fewer pneumonectomies are being done now, as compared to ten years ago; these more radical operations usually are restricted to Stage II lesions. One can anticipate pneumonectomy to be accompanied by a 10-20% operative mortality. Extended resections involving the chest wall, diaphragm, vena cava, or bronchoplastic procedures seldom deserve consideration.

Irradiation Therapy

The majority of patients with cancer of the lung must look for help to the radiotherapist. The newer, more precise, and fragmented irradiation plans are more successful in the palliation of lung cancer. Relief of vena caval obstruction, the ablation of brain metastasis, and the control of painful bone metastasis

are notably gratifying. When patients can be spared an "exploratory thoracotomy", the radiotherapist has an earlier chance for treatment of a less debilitated patient; hence, a better result. Presently, new areas of radiation research include "prophylactic" treatment to the central nervous system, interstitial implantations with radioactive iodine[125] and iridium[192], and therapy with particles of high linear energy transfer.[4]

Chemotherapy

Undifferentiated small cell (oat cell) carcinoma has been notoriously difficult to treat with surgery or irradiation; it defies staging. These lesions, however, have been shown to be the most vulnerable to combination chemotherapy. This malignancy has bloodborne metastasis very early, and one usually predicts a five-month survival from the time of diagnosis. The chemotherapy literature is now consistently reporting improved survivals of 10-12 months, and rare "cures".

Very recently, other chemotherapy protocols, such as MACC (methotrexate, Adriamycin, cyclophosphamide, and CCNU) have been the subject of enthusiastic reports for other histologic types of bronchogenic carcinoma.[8]

Immunopotentiation with levamisol[9] and with BCG[10] are also current "hot" topics of investigation.

T, N, and M Categories, Carcinoma of the Lung

Note: Each case must be assigned the highest category of T, N, or M describing the full extent of disease in that case.

T (Primary Tumors)

TX: Tumor proven by the presence of malignant cells in bronchopulmonary secretions but not visualized roentgenographically or bronchoscopically.

T1: Tumor is 3.0 cm or less in greatest diameter, surrounded by lung or visceral pleura and without evidence of invasion proximal to a lobar bronchus at bronchoscopy.

T2: Tumor more than 3.0 cm in greatest diameter, or tumor of any size that, with its associated atelectasis or obstructive pneumonitis, extends to the hilar region. At bronchoscopy the proximal extent of demonstrable tumor must be at least 2.0 cm distal to the carina. Any associated atelectasis or obstructive pneumonitis must involve less than an entire lung, and there must be no pleural effusion.

T3: Tumor of any size with direct extension into an adjacent structure such as the chest wall, the diaphragm, or the mediastinum and its contents; or demonstrable bronchoscopically to be less than 2.0 cm distal to the carina; any tumor associated with atelectasis or obstructive pneumonitis of an entire lung or pleural effusion.

N (Regional Lymph Nodes)

N0: No demonstrable metastasis to regional lymph nodes.

N1: Metastasis to lymph nodes in the ipsilateral hilar region (including direct extension).

N2: Metastasis to lymph nodes in the mediastinum.

M (Distant Metastasis)

M0: No distant metastasis.

M1: Distant metastasis such as in scalene, cervical, or contralateral hilar lymph nodes, brain, bones, lung, liver, etc.

Stage-Grouping, Carcinoma of the Lung

Occult Carcinoma

TX, NO, MO: Occult carcinoma with bronchopulmonary secretions containing malignant cells but without other evidence of the primary tumor or of metastasis to regional lymph nodes or distant metastasis.

Invasive Carcinoma

Stage I—T1 N0 M0; T1 N1 M0; T2 N0 M0: Tumor that can be classified without any metastasis or with metastasis to lymph nodes in the ipsilateral hilar region only, or tumor that can be classified T2, without any metastasis to nodes or distant metastasis.

Stage II—T2 N1 M0: Tumor classified as T2 with metastasis to lymph nodes in epsilateral hilar region only.

Stage III—T3 with any N or M; N2 with any T or M; M1 with any T or N: Any tumor more extensive than T2, or any tumor with metastasis to lymph nodes in mediastinum, or with distant metastasis.

Prognosis

The overall, five-year, survival rate reported for lung cancer is 8% when all stages are considered. The Task Force on Carcinoma of the Lung of the American Joint Commission for Cancer Staging has nicely summarized the survival data from several cooperating centers prior to 1971; the information was analyzed to distinguish modes of therapy. It is quite apparent from these data that surgical resection of Stage I and II lesions is the treatment of choice, but that surgery is futile in small cell carcinoma and any Stage III lesions.[6] The prognosis of alveloar cell carcinoma is the same as any adenocarcinoma of comparable stage.

Table 1. Summary of Results of Field Trials for Carcinoma of the Lung, Two-Year Cumulative Percent Surviving

Histologic Type	Stage I % (No.)	Stage II % (No.)	Stage III % (No.)
Squamous cell	46.6 (331)	39.8 (66)	11.5 (524)
Adenocarcinoma	45.9 (151)	14.3 (28)	7.9 (334)
Undifferentiated large cell	42.8 (61)	12.9 (17)	12.9 (103)
Undifferentiated small cell (oat cell)	6.0 (38)	5.0 (20)	3.8 (302)

Summary

The present epidemic of carcinoma of the lung is a consequence of society's indulgence of cigarette smoking. Most of the progress in treatment has resulted from more accurate staging of the cancer at the time of diagnosis and the selection of the safest therapy. Future progress hinges on the public health measures to stop smoking, and to a much lesser degree on earlier diagnosis and advances in radiotherapy and chemotherapy.

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CANCER TRENDS COMMENT

The dismal facts about lung cancer are admirably and accurately presented in this article. Despite wide and repeated publicity, many people continue to smoke. Currently the American Cancer Society is mounting a campaign, "Target Five," to educate people to stop smoking. By November, a "Great American Smokeout" will have been held.

One must wonder why people continue to smoke in the face of clear knowledge that smoking is a serious health hazard. Perhaps the organization of the brain into a dominant and nondominant hemisphere holds the key. It appears as though the dominant hemisphere plays the active role in logic, i.e., the processing of analytical information, while the nondominant hemisphere reacts to emotional symbols and really dominates our actions. Thus far our campaigns to stop smoking have largely appealed to the dominant hemisphere. Could an approach to the right hemisphere for right-handed people work? So instead of worrying about making a safer cigarette by decreasing the concentration of tars and nicotine, we add some things to the cigarette. Put in something that causes acne. Then, for sure, the message will immediately reach the susceptible adolescent populations. Or perhaps add something that, when burned, gives off the odor of a skunk. Then, "He is handsome but he stinks".

Obviously we can't add anything to cigarettes. But if we continue to add emotional bullets to our campaign, we may increase our success amongst those smokers whose nondominant hemispheres tell their dominant hemispheres, so that by the time we get cancer of the lung we will be real old people of 30-40 years of age.

Gerald Goldstein, MD

Federal Income Tax: A Review for Physicians

Edward H. Achorn, MA, CPA, and Donald L. DeMuth, MBA, CPA,
Middletown, Pennsylvania

This review of IRS rulings pertinent to the physician gives a clear and concise guide to income tax preparation. Whether or not you prepare your return yourself, you will enhance your chances of minimal financial penalty by understanding these principles.

YOU can minimize the financial effect of the income tax system by understanding its increasing complexities and how they apply to physicians. Your tax adviser's work can be only as effective as the material you give him and the knowledgeable way you have assembled it.

Deposits and Receipts.

The tax adviser probably will encourage the physician to deposit all receipts intact daily and make all payments by check, in order to establish support for all items entering the return. (Since consistency is required and the first year is precedent-setting, the new physician is urged to seek professional advice.)

This is the first in a series of articles dealing with financial and practice management. Future entries will present such topics as the choice of solo, group, or corporation practice, and the new role of computors in medical practice and their legal implications.

The authors are members of the American and Pennsylvania Institutes of Certified Public Accountants and assistant professors at Penn State University. Their work has been published previously in *Pennsylvania Medicine*, the journal of the Pennsylvania Medical Society.

Address correspondence to Mr. Achorn at Pennsylvania State University, the Capitol Campus (37), Middletown PA 17057.

Cash and Accrual Basis.

In general, cash basis means that income and expenses are reported when received and expended respectively. With the accrual basis, items are reported when earned and incurred respectively. Most physicians use the cash basis. The opportunity for tax planning is apparent with the cash basis, i.e., timing of income and expenses. This feature is available equally to sole proprietors, partnerships, and corporations.

Income

Salaries (corporate practice, schools, hospitals)—Form W-2.

The employer supplies Form W-2 for all earnings. The physician in corporate practice will be treated as an employee and pay his taxes in that fashion. Additionally, the corporation will pay taxes on its net income.

Partnership Income—Form 1065 and Schedule K-1.

The partnership does not pay income tax, but is required to report on a tax return its income and any other items subject to special treatment, including each partner's distributive share of the earnings and other items. Note that this is the total earnings, and not the withdrawals of the physician. If there is a loss, it is deductible only to the extent of the amount "at risk," which generally will be the amount in the partner's capital account. Normally, physicians in a part-

nership will have to pay a quarterly estimated tax.

Solo Practice Income.

The complete books of account should be made available to the tax adviser. Assembling them in an orderly fashion, together with appropriate support (bank statements, cancelled checks, expense accounts, receipts, invoices) helps the adviser in his work, and helps you if the return is audited.

Dividends and Interest.

Form 1099 is the substantiating document—but computers have been known to err: Accumulate your receipts and match them carefully with the Form 1099's supplied to you. Above all, don't forget any interest on US tax refunds.

Purchase and Sale of Securities.

Purchase and sale advices from your broker should be gathered and matched against the checkbook to insure that all are accounted for. The capital gains holding period has been lengthened to 9 months in 1977 and to 12 months in 1978. If selling securities in 1978, be sure the 12-month holding period has been met; what has previously been a long-term gain could be a short-term gain in 1978.

Real Estate Sales and Improvements.

Special rules apply to taxpayers 65 years and over, and to the taxpayer who reinvests the proceeds of a real estate sale in another property, particularly his own residence. Keep a careful record of improvements to property; these may be used to offset gain, but they must be fully documented.

Awards, Prizes, and Paid Tuition.

In general, these items are taxable. Exceptions to the rule are scholarship and fellowship grants, and prizes and awards received in recognition of religious, charitable, or scientific achievement. Selection without action on the recipient's part and absence of a requirement for substantial future services are necessary for exemption. IRS is currently giving attention to these items. Tuition reimbursements to enrolled employees do not qualify for exemption. These expenses may be deductible, however, if the training either 1) maintains or improves existing skills, or 2) meets the express requirements of an employer to retain a job. Scholarship and fellowship grants from a tax-exempt institution to non-degree candidates may be excludable in the amount of $300 per month up to 36 months, but there must be no substantial requirement of future services.

Gain on Sale of a Practice.

This is taxed in part as ordinary income and in part as a capital gain. Advice on structuring the sale to minimize tax effects should be sought prior to the sale. The tax can be substantial.

Tax-Exempt Income.

The most common items of tax-exempt income are state and local bonds, social security benefits, gifts and inheritances, and fellowship and scholarship grants (to $3600). (Consider tax-exempt bonds: If the physician is at a marginal tax rate of 60%, a 6% tax-free municipal compares with a taxed bond bearing a 15% return.)

Business Deductions

In general, all reasonable, ordinary, and necessary expenses of operating a practice are deductible. In addition to normal expenses, these may include:

- Portion of office in home if used to meet patients. This includes a pro-rata portion of all expenses of the house, including utilities, heat, etc.
- Entertainment and promotion expenses if thoroughly documented and reasonable in amount. This can include a portion of such items as country club dues.
- Education, including continuing education seminars, travel and related expenses. Include in your notes brochures covering the purpose and agenda.
- Payments to qualified pension and profit-sharing plans (deductible by corporations). See Adjustments to Income.
- Interest on practice-related indebtedness. This is deductible as a business expense.
- Bad debts. These normally are deductible only for accrual-basis taxpayers—and physicians normally use the cash basis.

Adjustments to Income

Alimony (not child support) results in an adjustment to income for the paying spouse (and is included in the recipient's income) if made under a decree of divorce or separate maintenance, or under a written instrument incident thereto. The payments must be periodic. Payments that are uncertain in amount, or for an indefinite period, or for more than 10 years, qualify as periodic.

Contributions to IRA and Keogh Plans are treated as adjustments to (i.e., reductions from) income. Most financial institutions offer specimen plans that have already received general approval, but specific approval is necessary. Some taxpayers hastily file an application for an IRA or Keogh Plan, as a last-minute effort to minimize taxes, and file for a deduction on the basis of the application. Deductions may indeed be taken in this way, but the authors do not recommend it: Lack of latter approval by IRS could create difficulties. A limit of $1,500 is imposed on IRA's and $7,500 on Keogh's, both being subject also to a 15% limit on earned income.

Moving expenses that can be adjustments to income include pre-move travel and temporary living

expenses to $1,500. Total expenses of moving, including temporary quarters, is limited to $2,500. If the physician is self-employed, he may deduct office-moving costs in full.

Forfeited interest for premature withdrawal of interest-bearing accounts.

Itemized Deductions

Medical Expenses.

Medical expenses in excess of 3% of adjusted gross income are deductible. Included are those paid by the taxpayer (net of insurance reimbursements) for himself, his spouse or dependent. (Note: The $750-income ceiling is ignored for dependency status in this instance, though the other requirements as to residency, relationship, and support do apply. This is one of those small irregularities that makes income tax reporting so confusing.) Surgical procedures must be legal under state law to qualify as medical deductions.

- Prescribed vitamins and supplements are deductible.
- Toiletries and toothpaste are not deductible.
- Under any circumstance, 50% of medical insurance to $150 is deductible. The insurance category includes the monthly deduction from Social Security recipients' checks for Medicare coverage.
- Eyeglasses, hearing aids, and dentures are deductible.
- Special schooling for physically or mentally handicapped persons is deductible.
- Treatment in a therapeutic center for alcoholism or drug addiction is deductible.
- Transportation "primarily for and essential to" medical care, including out-of-pocket expenses (or 7¢ per mile for auto travel) plus toll and parking charges, is deductible.

Taxes.

Those taxes imposed on the taxpayer and dependents (and paid by him) are deductible in the year paid. IRS provides alternate tables for state sales and gasoline taxes in lieu of keeping detailed receipts. In any event, retain receipts for major purchases such as automobiles. Also retain settlement sheets for real property purchases. Federal income, Social Security payments, gift taxes, estate and inheritance taxes are not deductible. Regulatory permits such as auto and driver licenses are not deductible, but you may allocate a portion of an auto license as a business expense deduction.

Interest.

All interest is deductible, including finance charges on credit cards, points (for securing the instrument, not for services) on a home mortgage, and interest on delinquent taxes. If points and other forms of prepaid interest are not for the physician's residence, however, they may have to be deducted pro-rata over the life of the loan.

Basic Federal Tax Formula.

Income

less
business deductions

less
adjustments to income

equals
adjusted gross income

less
standard deduction or itemized deductions

less
exemptions

equals
Taxable Income.

Compute tax

less
tax credits

equals
Total Tax (what you finally pay).

Contributions.

Contributions made during the taxable year to recognized charitable organizations are deductible. Consider also gifts of appreciated property; if they are capital assets, the deductible amount may be more than your basis, or cost.

The purchase of tickets to charitable events is deductible only to the extent of the excess of the amount paid over fair market value. Blood donations and gifts for lobbying purposes are not deductible.

Non-Business Losses.

Business losses are deductible in full as business deductions. Non-business losses are deductible (the excess over $100 for each occurrence) if they are sudden, unexpected, or unusual. This includes fire, flood, theft, hurricane, collision, frozen pipes, riot, embezzlement, drought. It does not include lost items (e.g., jewelry), erosion, tree disease.

Miscellaneous Deductions.

- Professional expenses such as tax and financial advice, legal advice for property protection, income-producing functions, etc.
- Professional journals, meetings, conventions, licenses.
- Clothing used for work (including cost and cleaning) if not normally worn on the street.

• Political contributions. If you are in a marginal tax bracket above 25%, these are deductible to $100 for single persons and $200 for joint returns.

Not deductible are attorney fees for divorce, will, personal affairs; tax penalties (although interest on these is deductible); cost of commutation between home and work; employment-search travel expenses; cost of meals while on call; spouse expenses on convention trip.

Dependent Exemptions

For the standard exemption for a dependent, there are standard tests that must be met; these relate to residency, relationship, support, and income. There are some exceptions, however, as follows.

Full-Time Student Over Age 19.

This student must have been enrolled for at least five months of the taxable year, the support requirement must be met, and the student is prohibited from filing a joint return with a spouse. But the $750-income limit does not apply, and, if the other qualifications are met, the parents may claim exemption even though the student also is filing a tax return.

Divorce and Separation.

These situations present peculiar problems; be sure your attorney is specific, when drawing up documents, as to who may claim dependency. A divorced or separated spouse is not a specified relative and may not be claimed as a dependent, nor may a joint return be filed. One or both might be permitted to file as head of a household, however.

Age and Sight.

An additional exemption may be claimed for each spouse over 65 years. And for each spouse whose visual acuity in the better eye is no more than 20/200, an additional exemption may be claimed. In other words, in both these cases the exemption is doubled.

Tax Credits

More important than deductions are tax credits, for they directly reduce your tax. That's right, a $100 credit reduces the tax by $100.

Investment Credit.

This probably has the greatest impact for the physician. It applies to tangible personal (not real estate) property with a life of at least 3 years. The credit is computed based on the purchase price, and is 3⅓% for a life from 3 to 5 years; 6⅔% from 5 to 7 years; 10% for 7 years or more.

This credit applies to leased property as well as owned. The lessor passes it along to the lessee as part of the leasing deal. If you are leasing an automobile, for instance, you may have an eligible credit here.

When a physician with property on which credit has been taken joins a group practice and transfers that property to the group, complications may arise. It is wise to consult your tax adviser before taking this step.

Other Credits.

• Political contributions (discussed under Itemized Deductions).

• Child care expense to $800 if both spouses work or go to school.

• General Credit: 2% of taxable income up to $9,000 or $35 per dependent, whichever is greater.

• Work Incentive Program (WIN): If former welfare clients certified by the Secretary of Labor are hired, certain portions of their salaries may be deducted.

• Jobs credit: Part of wages of certain new employees for tax years beginning in 1977 or 1978.

• Foreign tax credit: Taxes paid foreign governments under certain circumstances.

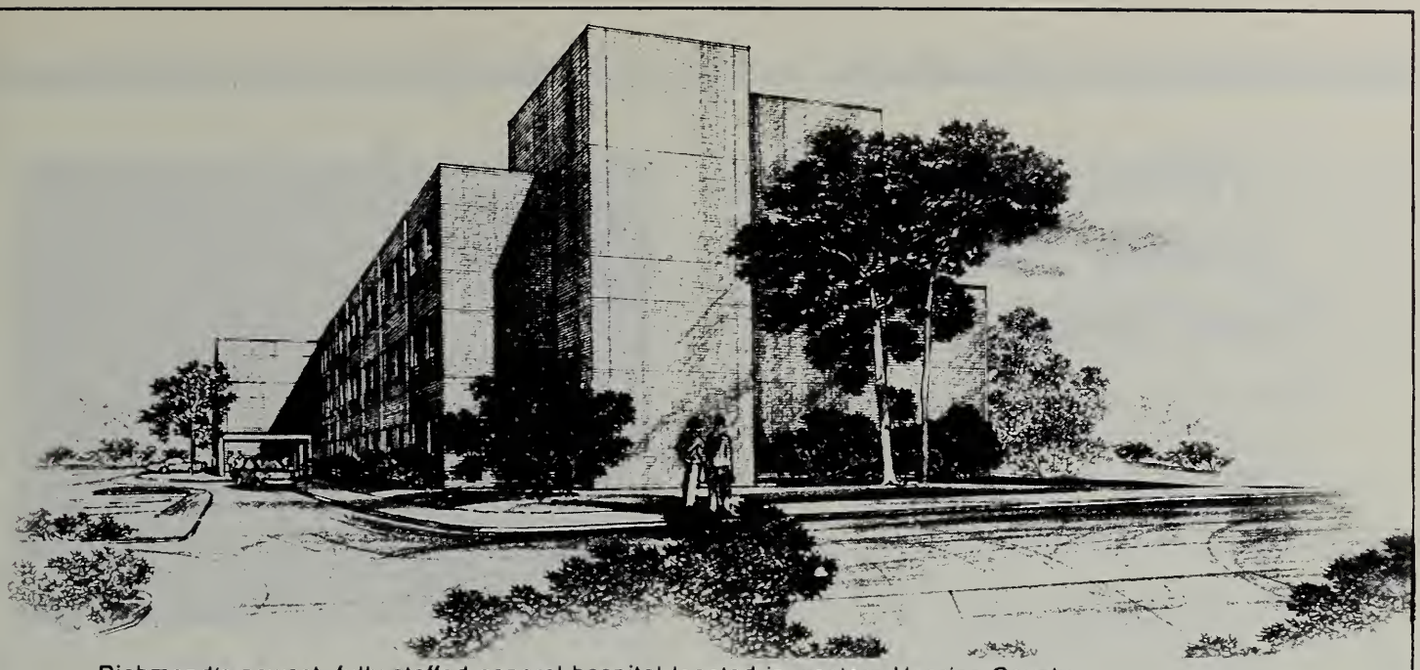
• Gasoline, lubricating oil, and special fuels credit: Gasoline taxes paid for use by non-highway vehicles, most commonly farm and aviation purposes.

• Excess Social Security taxes: If you have more than one employer, and each is witholding Social Security taxes, your Social Security payments for the year may be in excess. The excess is taken as a tax credit, which amounts to a refund. Be sure you take it; the Social Security system won't refund it.

• Other taxes withheld: We are all familiar with the common system of withholding income taxes from paychecks. There are other instances in which income tax is withheld, such as prizes of money or winnings from gambling. These withheld taxes should be taken as tax credits.

• Undistributed capital gain on regulated investment companies: This occurs most commonly in mutual funds; it is included proportionately in the gross income of shareholders. The tax paid by the mutual fund is allowed as a credit. ■

The authors have prepared worksheets to go with this article. They give detailed entries for all categories in the text, so that you can identify and organize your income tax options. For a free set of these worksheets, write to VIRGINIA MEDICAL, 4205 Dover Road, Richmond VA 23221.



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Differentiating Gastric Tumors From Benign Ulcers

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INTRAMURAL EXTRAMUCOSAL gastric lesions may be difficult to distinguish from benign gastric ulcers.[1-3] We have examined two patients with lesions in the gastric antrum which fulfill the criteria of intramural extramucosal tumors and both were found to be benign ulcers.

Case 1.

The patient, a 54-year-old white female, complained of epigastric abdominal pain for several weeks, slightly relieved by antacids. Physical examination was normal. Stool specimens were guaiac negative and the hematocrit was 40. An upper gastrointestinal series exhibited a 1.5 cm × 1 cm nonulcerated lesion on the greater curvature of the antrum (Figure 1). The lesion filled all the criteria for an intramural extramucosal lesion. Gastric folds immediately adjacent to the lesion appeared normal. No "point-like projections" could be identified within the mass. Gastroscopy and later surgery revealed the lesion to be a benign peptic gastric ulcer.

Case 2.

The patient, a 40-year-old female, complained of mid-abdominal pain of two years' duration. She previously had had a cholecystectomy and hysterectomy. Physical examination was normal. Stools were guaiac negative, but the hematocrit was 33. An upper gastrointestinal series demonstrated a 1 cm × 2 cm apparent mural lesion on the greater curvature of the antrum with an area of central diamond shaped ulceration (Figure 2). The gastric folds adjacent to the lesion were normal. Surgery revealed a benign peptic ulcer.

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Submitted 7-1-76.



Fig. 1. Supine roentgenogram of the gastric antrum demonstrates a mural mass without ulceration or thickened adjacent mucosal folds (white arrow).

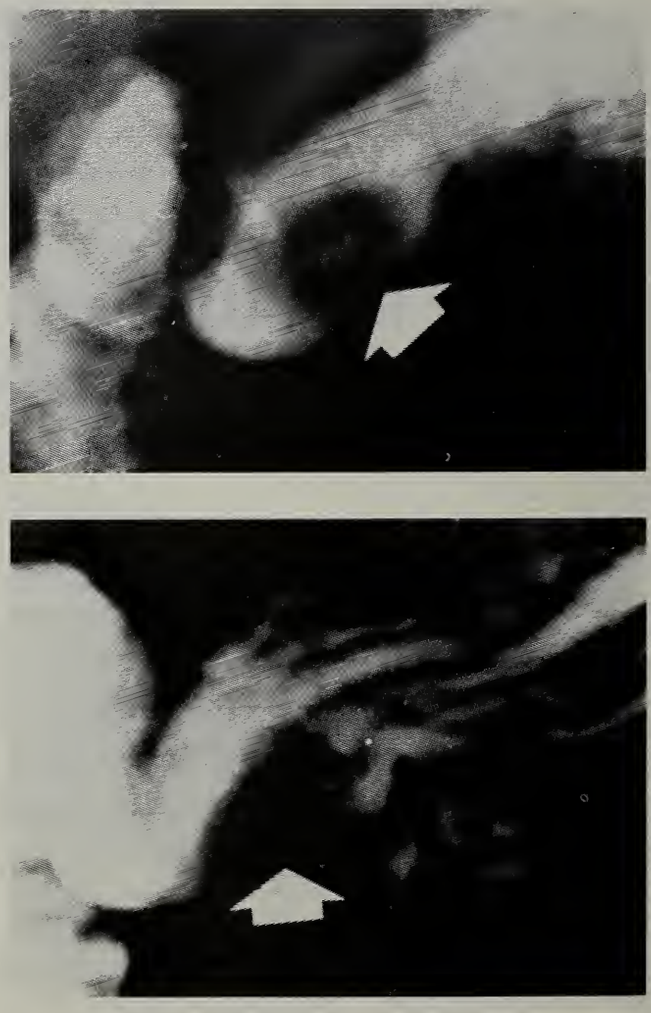


Fig. 2. Prone (above) and supine (below) roentgenograms of the gastric antrum demonstrate a mural lesion with a diamond-shaped ulceration and normal adjacent mucosal folds (white arrow).

Discussion

In previous reports of benign peptic ulcers which mimic extramucosal intramural lesions, two roentgenographic findings have been suggested to differentiate these pathologic entities. They are localized thickened gastric folds adjacent to the lesion and "point-like projections" within the mass, which have been thought to represent radiating folds.[1,3] Both these findings have been ascribed to benign ulcers. In Case 1, neither "point-like projections" nor thickened folds were present. In Case 2, the central ulceration could be considered as having "point-like projections"; however, the adjacent folds were of normal caliber. Both cases demonstrate the difficulty in distinguishing a benign ulcer from an intramural extramucosal gastric lesion. The lack of thickened mucosal folds adjacent to the lesion or "point-like projections" within the mass should not exclude benign ulcer from the differential diagnosis of such lesions. Surgical exploration and histologic examination of the resected lesion are necessary for definitive diagnosis.

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Contraindications: Hypersensitivity to any of the ingredients.

Warnings: As with other codeine-containing preparations which may be habit forming, administration is not recommended over an extended period.

Precautions: Maxigesic capsules may produce drowsiness or dizziness which may impair ability to drive or perform other tasks requiring alertness. Patients should be warned not to drive an automobile or operate machinery should they experience such reactions while taking this drug. In such cases, reduction in dosage or discontinuance of the drug should be considered. Avoid alcoholic beverages. As with all narcotic medications, care should be exercised in prescribing this product in view of the possibility of suppression of productive cough.

Adverse Reactions: As with other narcotic-containing products, drowsiness, constipation, miosis, nausea and vomiting may occur.

Dosage and Administration: *Adults:* 1 to 2 capsules every 4 hours as needed for pain. *Children, 6 to 12 years of age:* 1 capsule every 4 hours.

Caution: Federal law prohibits dispensing without prescription.

A Diagnostic Bonus For Intravenous Urography

P. M. Fitzer, MD,
Newport News, Virginia

A RADIOGRAPH made 15-20 seconds after the rapid injection of contrast has been advocated as a part of the routine intravenous urographic examination.[1,2] The dense nephrogram obtained on this early radiograph has proven valuable in the diagnosis of many renal abnormalities. This report describes a bonus: the demonstration of a systemic venous anomaly.

Case Report

A 35-year-old woman was admitted for elective abdominal hysterectomy. Dysfunctional bleeding had been present for several years. There was no history of tuberculosis or other pulmonary disease; there had been no previous thoracic trauma. Physical examination, complete blood count, urinalysis and SMA-14 were normal. A chest radiograph was quite normal except for a curved double density projecting through the aortic knob (Fig. 1). Preoperative intravenous urography was performed. The routine radiograph made 20 seconds after bolus injection of 50 cc Renografin (meglumine diatrizoate 52%, sodium diatrizoate 8%) showed filling of a large vein in the left paraspinal area. The remainder of the examination was unremarkable. Subsequent bilateral basilic vein injections showed an apparent block of the left innominate vein just before its junction with the right innominate vein. Venous return from the left innominate vein continued caudad down the superior intercostal and accessory hemiazygous veins across the midline to the azygous vein, and cephalad to the superior vena cava (Fig. 3). The left superior intercostal vein clearly produced the double density projected through the aortic knob on the chest radiograph. An earlier chest radiograph five years earlier showed no change in the double density. Since there was no evidence of mediastinal disease by history, physical examination, or chest radiograph, it was felt that the patient most likely had congenital absence or hypoplasia of the left innominate vein. She has continued in good health.

Discussion

Congenital systemic venous anomalies, including hypoplasia of the left innominate vein, are not rare.[3] In such instances, retrograde accessory hemiazygous flow may be demonstrable. The segmental lumbar veins drain into the right and left ascending lumbar veins, which become, respectively, the azygous and hemiazygous veins above the diaphragm. The hemiazygous vein crosses the midline from left to right at the lower thoracic level and joins the azygous vein. The accessory hemiazygous vein is the upward thoracic continuation of the hemiazygous vein in the left paraspinal area. The accessory hemiazygous receives the segmental intercostal veins, then joins the superior intercostal vein, which sweeps anteriorly just lateral to the transverse thoracic aorta and joins the left innominate vein.[4] In obstruction or hypoplasia of the left innominate vein, there may be retrograde flow caudad in the accessory hemiazygous across the mid-

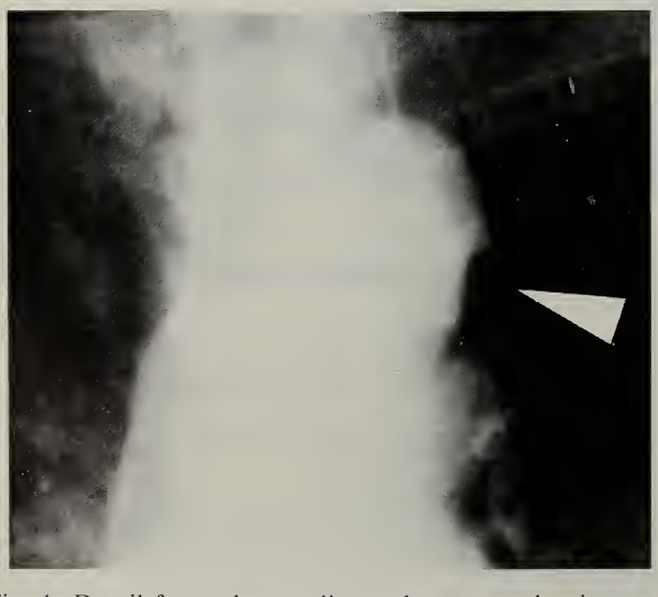


Fig. 1. Detail from chest radiograph: convex density projecting inferiorly and laterally through aortic knob (arrow).



Fig. 2. Intravenous urogram film 20 seconds after injection of contrast. Note filling of accessory hemiazygous vein in lower left thoracic paraspinal area (arrow).



Fig. 3. Bilateral basilic vein injections show no filling of left innominate vein near junction with the right innominate vein (white arrow). Retrograde flow is caudad down superior intercostal (triple arrow) and accessory hemiazygous (small arrow), across midline (double arrows) to azygous vein (large arrow). Superior intercostal vein clearly accounts for density projecting through aortic knob in Fig. 1.

line in the lower thorax to the azygous vein and superior vena cava.[5] Routine radiographs 20 seconds after contrast injection during intravenous urography may reveal collateral flow secondary to these venous anomalies, as in the present case.

It should also be pointed out that venous obstruction is common in neoplastic involvement of the mediastinum.[6,7] Demonstration of collateral venous flow during intravenous urography could be an important early diagnostic clue in such cases.[8] A radiograph made 15-20 seconds after bolus injection of contrast should become a routine part of every intravenous urographic examination.

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PORTRAITS



Dr. Charles E. Davis, Jr., MSV President-Elect (center), presents the annual MSV scholarships to four students at the Eastern Virginia Medical School in Norfolk. The happy recipients, from left: Keith Brosius, Annandale; Stewart Gleishman, Norfolk; John Stephens, Williamsburg; James Cook, Richmond.



MSV members at work at the 1977 AMA convention in San Francisco appear here in the top two pictures, taken by the AMA photographer. For the illustrated report by the Virginia delegation's chairman, Dr. William S. Hotchkiss, see the August issue.

At a Virginia breakfast caucus, Dr. James M. Moss, Alexandria (left), and Dr. Levi W. Hulley, Jr., Richmond, listen intently. Both men were guests of the delegation at the caucus.



Dr. Percy Wootton, Richmond (left), and Dr. Harold B. Haley, Roanoke, ready their reference material. Dr. Wootton was an alternate delegate, Dr. Haley a visitor to the caucus.

The Medical Society of Virginia
PROCEEDINGS

Minutes of the Council

A meeting of the Council of The Medical Society of Virginia was held in Richmond at the Hyatt House on Saturday, November 19, 1977.

Members Present: Dr. William J. Hagood, Jr.; Dr. Charles E. Davis; Dr. W. Leonard Weyl; Dr. George M. Nipe; Dr. W. T. Thompson, Jr.; Dr. K. K. Wallace, Jr.; Dr. Richard L. Fields; Dr. Harold L. Williams; Dr. Gervas S. Taylor, Jr.; Dr. Charles M. Caravati, Jr.; Dr. Gordon G. Birdsong; Dr. Girard V. Thompson, Sr.; Dr. H. C. Alexander, III; Dr. Robert C. Green, Jr.; Dr. Harry C. Kuykendall; and Dr. C. Barrie Cook.

Others Present: Dr. George E. Broman, 2nd Vice President; Dr. Edwin L. Kendig, Jr., 3rd Vice President; Dr. William S. Burton, Dr. J. Latane Ware, Dr. Charles H. Crowder, Jr., Dr. William R. Watkins, Dr. James B. Jones, Dr. Harvey D. Smallwood, Dr. Nicholas G. Colletti, Dr. James L. Patterson, Jr. and Dr. Gerald J. Fisher, Vice-Councilors; Dr. Michael A. Puzak, AMA Delegate; Dr. Raynond S. Brown, Dr. Percy Wootton, and Dr. Arthur A. Kirk, Alternate AMA Delegates; Dr. James S. Kitterman, President-Elect, Norfolk Academy of Medicine; Dr. Norman J. Knorr, Dean, University of Virginia School of Medicine; Dr. Gerald H. Holman, Dean, Eastern Virginia Medical School; Dr. Jesse L. Steinfeld, Dean, Medical College of Virginia; Dr. Robert Jackson, representing Dr. James B. Kenley, State Health Commissioner; Dr. William S. Hotchkiss, member AMA Judicial Council; Dr. Harold Nemuth, Chairman, VaMPAC; Mrs. William N. Gordge, President, The Medical Society of Virginia Auxiliary; Miss Othella T. Owens, President, Student Medical Association of MCV; Mr. Robert G. Stuart, Executive Secretary, VaMPAC; Mr. Alden Flory, President, Blue Cross-Blue Shield of Virginia; Mr. Dave Peters, representing Mr. Allen Goolsby as Attorney for the Society; and Mr. Edward S. DeBolt.

President's Remarks.

Dr. Hagood brought Council up-to-date on Society activities, particularly those having to do with HSA's and national health insurance. He deplored the extreme short notice on recent public hearings held by various HSA's in the state. Even though it was impossible for the Society to study in detail the various plans proposed by HSA's, position statements were presented on three occasions.

Dr. Hagood expressed considerable dismay over published statements by the Central Virginia HSA as to its responsibility in determining who will live and who will die. He went on to report that he had met with Congressman Satterfield for the purpose of discussing the HSA problem. During the meeting he also briefed Mr. Satterfield concerning the Society's efforts to improve its overall communications program and its recent actions with reference to continuing education. The congressman in turn urged the Society to increase its communications with Virginia's congressional delegation in order that everyone might keep current on the fast-moving and ever-changing health care front.

The President stated that recent developments made it obvious that Virginia's congressmen must have a primary contact within the Society, particularly where matters of extreme urgency are concerned. It is his feeling that the President should be that contact.

Dr. Hagood went on to report on the Negotiation Seminar recently held in Richmond with the cooperation of AMA. Approximately 30 physicians spent the better part of two days studying and developing effective negotiating techniques.

HSA's.

Some concern has been expressed over the fact that physicians are becoming increasingly reluctant to

serve on HSA Boards. A number of resignations in recent weeks attest to that fact.

Dr. Crowder stated that most physicians are just beginning to recognize the significance of the HSA program and what it portends for the future of medicine. He went on to say that medicine is about three years late in recognizing the danger signs and joining the battle. He also touched on the voluminous proposals developed by HSA staffs and made available to area councils only nine days prior to public hearings. It is obvious that immediate steps must be taken to have physicians work as closely as possible with sub-area councils.

During the ensuing discussion it was agreed that involvement by physicians in HSA activities is the only acceptable answer. It was pointed out that the one bright spot in the HSA picture was those recent developments which have caused physicians to become concerned. Obviously this new interest and concern will work to medicine's advantage.

Dr. Hagood then advised Council concerning his plan to establish a Vanguard Committee for the purpose of spearheading the Society's activities with reference to the HSA program. In addition, the Committee would stand ready to respond, at the call of the President, to any proposed or adopted federal or state health legislation or regulatory activities.

The Vanguard Committee will, at the outset, concern itself with the State Health Coordinating Council and the various HSA's. In addition to serving as a monitor of these organizations, the Committee will make sure that the Society is represented at the various public hearings sponsored by three organizations. Testimony will be presented as often as possible. The Committee will report directly to the President, keeping him fully advised concerning its activities and recommendations.

Dr. Hagood went on to say that the Committee would be headed by Dr. Richard Fields and that its membership would be drawn from those Society members who have been active in the HSA program. There will, in all likelihood, be at least two committee members from each of the five HSA districts.

The President went on to say that he would personally contact those physicians who have resigned in recent weeks from various HSA councils and boards. It is hoped that their knowledge and experience can be salvaged for the good of all concerned.

Dr. Hagood stated that, in his opinion, AMA should, to the maximum extent possible, make its resources available to state and local societies when problems associated with HSA's arise. With this thought in mind, he offered a proposed resolution which, hopefully, could be introduced by Virginia's delegation at the coming AMA meeting in Chicago. A motion by Dr. Kuykendall to adopt the following Resolution was carried:

> WHEREAS, physicians recognize that they exercise primary repsponsibility for maintaining quality medical care for the public, and
>
> WHEREAS, other health care providers also share in the obligation to maintain quality health care for the public,
>
> WHEREAS, government agencies, as such, have no capability of providing any health care to the public, therefore be it
>
> RESOLVED, that the AMA through its negotiations, public relations and other relevant departments, and in conjunction with local medical societies, advise, counsel and direct physicians in their efforts to direct health-planning agencies in maintaining quality health care for the public and provide physicians with the necessary information, data and other support to deal effectively with these agencies.

A follow-up motion by Dr. Alexander supporting Dr. Hagood's earlier statement on the Vanguard Committee was seconded and adopted.

Liaison to Virginia Hospital Association.

Dr. John Myles, Chairman, reported on a meeting of his Liaison Committee with the Virginia Hospital Association on November 11. The Committee met with representatives of the Virginia Hospital Association for the purpose of discussing cost containment and other matters of mutual interest.

The main topic of discussion was cost containment legislation proposed by the Hospital Association—labeled the Virginia Health Cost Act of 1978. The legislation is designed to circumvent congressional action where rate setting is concerned. The Bill would create a Health Services Cost Review Commission within the Department of Commerce. This Commission, being part of state government, would be able to collect and review cost data without violation of the Sherman Anti-Trust Act. It was noted that physicians' offices would be excluded from such cost review since they are not subject to Certificate of Need requirements. It was the Committee's recommendation that the proposed legislation be referred to the Legislative Committee for its views and recommendations, and a motion to this effect by Dr. Alexander was seconded and adopted.

Dr. Weyl stated that the 50% figure used by Blue Cross and others in estimating the cost of empty beds should be reviewed. He said that the latest information available indicates that a 10% figure is more accurate and realistic.

Dr. Myles stressed the role of the physician in hospital cost containment, pointing out the importance of becoming involved in such areas of responsibility as planning, investments, employer relations, etc.

The Liaison Committee had also reviewed certain proposals by the HSA of Northern Virginia and was particularly concerned with its plans to seek changes in the rules and regulations governing Certificates of Need. The Committee believes that the proposed changes are inappropriate and inconsistent with existing law.

Telephone Listings.

It was recalled that, earlier in the year, Council has looked into the advisability of recommending certain guidelines pertaining to the listing of physicians in telephone directories by speciality. The end result was a decision to disassociate the Society from the validating of specialities in such listings. It requested the telephone company to publish a disclaimer as to any input by the Society or its components.

Mr. James Jackson and Mr. Charles Huntsinger, representing the Reuben H. Donnelley Corporation, discussed the problem from their point of view. Mr. Jackson stated that America now has a mobile population and that people are seeking quick and easy information about physicians and other professions as they move about. He went on to say that the Donnelley Corporation has worked very closely with AMA and that the specialty guidelines currently in use are the result of that working relationship. The new guidelines have been used in the Roanoke area for the first time in Virginia. All physicians in the area served by the directory were contacted and provided an opportunity to furnish information required under the guidelines. It was brought out that directory personnel have no alternative but to rely on the integrity of the individual physician to provide accurate information for his personal listing. There is some question at this time about the listing of clinics, and new rules are expected in the very near future.

There followed considerable discussion as to what responsibilities, if any, should be accepted by The Medical Society of Virginia and/or its components. Mr. Jackson explained why the Donnelley Corporation can in no way accept any liability where incorrect listing are concerned.

It was agreed that the Society should continue to urge that a disclaimer be published as to any input or involvement by the Society. Mr. Jackson was asked if his company would accept a paid advertisement noting the disclaimer and he indicated that he would investigate that possibility.

A motion by Dr. Cook to reaffirm Council's previous action with reference to publication of a disclaimer was seconded and adopted.

Dr. Jones stated that it was still not clear as to whether a component society should engage in any review activities. Dr. Kuykendall pointed out that restraint of trade laws make it impractical for the Donnelley Corporation to deal directly with medical societies.

Proposed Public Relations Project.

Mr. Steve Coltrin, representing the Burroughs-Welcome Corporation, discussed a proposed public relations project utilizing area TV stations. The project has apparently been well received in North Carolina and Mr. Coltrin believed that it would be just as well received in Virginia. The program is designed to be administered by local medical societies and the TV presentations are educational in nature. It was said to be invaluable in getting the public to turn to the medical profession for answers on questions pertaining to health care.

Dr. Hagood indicated that the Lynchburg Academy of Medicine had been approached concerning the possibility of conducting a feasibility study on the project in its community. A motion by Dr. Birdsong to officially refer the matter to the Lynchburg Academy of Medicine with a request that it make its findings and recommendations known to Council in January was seconded and carried.

Medical Student Project.

Mr. Ralph Rogers and Mr. Perry Fine, medical students from the Medical College of Virginia, briefed Council concerning a special project designed to place first- and second-year students in community hospitals, physicians' offices, etc., for short periods of time. The program enables students to work briefly in a clinical atmosphere. It was interesting to learn that 80% of those who have participated in the past have indicated that they are very much interested in returning to the community in which they were assigned. Funding of the program is essentially a local matter.

The program is officially referred to as MECO (Medical Education and Communication Orientation) and was originated by the American Medical Student Association. It has been endorsed by AMA, The American Group Practice Association and a number of others. Mr. Rogers stated that endorsement by The Medical Society of Virginia would be most helpful. He also expressed the hope that some form of effective liaison could be established with the Society.

Dr. Hagood stated that he had been involved in similar preceptor programs over the years and of-

fered a number of constructive recommendations. He expressed the hope that students participating in the MECO program would show their appreciation by keeping their rooms orderly, taking care of their personal laundry and not forgetting to say "thank you" when their visits are concluded.

All three Virginia medical schools endorse the program and consider it most worthwhile. A motion by Dr. Weyl to endorse the concept of the MECO project was seconded and adopted.

Informational Brochure.

Dr. Holman expressed the hope that some type of booklet or brochure could be developed outlining the responsibilities of physicians where Virginia law is concerned. Such a brochure would, in his opinion, be particularly helpful to medical students and newly licensed physicians. It would also be an effective teaching aid.

Dr. Holman stated that he had already contacted the State Board of Medicine and received assurance of its interest. Dr. Jackson stated that the Department of Health would also cooperate in such a project. The thought was expressed that the Department of Health might be in a position to assist with the funding.

Dr. Weyl then moved that a joint committee be established for the purpose of developing an information brochure at an appropriate time and arrange for its funding, possibly through the Department of Health. The committee would include representatives from The Medical Society of Virginia, Department of Health and all three medical schools. The motion was seconded and carried.

Student Component Medical Society.

Dr. Holman reported that students at Eastern Virginia Medical School are anxious to organize a student component medical society. He will soon contact the state office concerning the procedure to be followed.

Consumer Reports.

Dr. Davis called attention to a series of articles on malpractice appearing in the September, October and November issues of "Consumer Reports". The articles could well pose a serious problem since they list certain so-called "compensable events." These "events" are included in a proposal which would automatically compensate patients without having to prove negligence if they suffered from any of the actions on the list. Fear was expressed that this new concept of handling alleged malpractice incidents might gain popularity and thereby aggravate an already serious problem.

A suggestion was made that Virginia's AMA delegates discuss the matter at the national level and ascertain whether any action is planned. Dr. Davis was also requested to write the editor of "Consumer Reports" and let them know why the proposal contained in the articles is both unwise and impractical.

Secretarial Service for Specialty Groups.

The Virginia Society of Internal Medicine has, for several years, sought secretarial assistance from The Medical Society of Virginia. It believes that a valuable service could be provided by designating a staff person as executive secretary for those specialty groups that might be interested. Among the services to be provided would be dues billing, maintaining membership rosters, arranging meetings, preparing and mailing notices, etc.

It was learned that the Society of Internal Medicine is perfectly willing to defray the cost of such a service. A question was then raised as to how many other specialty groups would wish to take advantage of such a service should it be offered.

Council was advised that the Executive Committee had discussed this matter at some length and recommended that all specialty groups be contacted prior to the next meeting of Council concerning their interest and need of such a service. A motion by Dr. Cook adopting the Committee's recommendation was seconded and adopted.

Virginia Obstetrical & Gynecological Society.

During a recent meeting, the Virginia Ob-Gyn Society recommended that The Medical Society of Virginia "oppose any act that passively or actively excludes public funds for specific medical services that would deprive any segment of the citizens of this Commonwealth from medical care to which all other citizens are legally entitled."

The Executive Committee had reviewed this particular matter at some length and recommended no action by Council. It reasoned that the matter is outside the Society's area of responsibility and is essentially one which concerns the individual conscience. A motion to adopt the Committee's recommendation was seconded and carried.

1979 Annual Meeting.

The 1979 Annual Meeting of The Medical Society of Virginia will be held at The Homestead. Some concern has been voiced over the rates currently being charged at that hotel. It was pointed out, however, that one should keep in mind the fact that the rates in question are under the American Plan.

The Executive Committee had also discussed this item and recommended that every effort be made to

obtain assurance that a special convention rate would be granted at the appropriate time. A motion adopting the Committee's recomendation was seconded and carried.

AMPAC.

Dr. George T. Wilkins, a Director of AMPAC from Illinois, congratulated Virginia physicians on their active participation in the recent gubernatorial campaign. He stated that the entire nation had been watching Virginia and was most impressed with what it saw. He want on to say that Virginians should now turn their eyes to the future and prepare for some extremely important congressional races. He added that physicians must become more effective in getting their points across to the voters.

Dr. Harold Nemuth, Chairman of VaMPAC, agreed with Dr. Wilkins and expressed the hope that physicians in Virginia would rally to the support of their Political Action Committee. He deplored the fact that VaMPAC has actually lost members this year. This is particularly distressing in view of the fact that medicine is in one of its most crucial periods.

Annual Meeting Review.

Dr. Wallace, Speaker of the House, presented a concise report on some of the more important resolutions and reports considered by the House of Delegates in October. He made sure that everyone understood his rulings where the question of unified membership was concerned. Also mentioned was the importance of having resolutions submitted far enough in advance to permit their distribution prior to the first session of the House. Dr. Wallace recognized, however, that this is not always possible.

Council was then asked to consider the advisability of changing the Annual Meeting format in such manner as to hold Reference Committee hearings on Friday morning rather than the afternoon. The scientific sessions, usually held in the morning, could be shifted to the afternoon. The thought was expressed that such a shift might even improve attendance. The proposed change would make it possible for Reference Committee reports to be written much earlier in the day and make for a better distribution schedule. The suggested change was generally well received. It was mentioned, however, that many delegations like to caucus prior to Reference Committee hearings and the schedule should be arranged with this thought in mind.

Candidacy of Dr. Hotchkiss.

Council was advised of a decision by Dr. Hotchkiss to seek election to the Board of Trustees of the American Medical Association. All officers, delegates and



alternate delegates to AMA will be notified of his candidacy prior to the AMA Interim Session in December.

Dr. Hotchkiss discussed the make-up and duties of the Board. He stated that serving on the Board represents a personal commitment to American medicine and that he hopes he can make a worthwhile contribution to his profession.

It was then moved by Dr. Wallace that the Society endorse and support the candidacy of Dr. Hotchkiss for election to the AMA Board of Trustees. The motion was seconded and carried.

Blue Shield Advertising.

Council, at the request of the Richmond Academy of Medicine, turned its attention to recent advertising sponsored by Blue Shield of Virginia. The ads in question had to do with hospital beds and their relationship to the cost of health care. Particular attention was paid to the cost of maintaining so-called "surplus beds". There was some feeling that the ads were confusing to the public and possibly misleading. They were also considered by some to be inappropriate.

Mr. Flory informed Council that the ads were in the form of 60-second radio spot announcements that were contracted to run a specific length of time (three weeks), and at the completion of the contract they automatically ceased to be heard. He went on to say that the spots were one part of an overall effort to acquaint the public with all of the many factors affecting the cost of care. He assured Council that the figures used in the ads had been researched for accuracy. Surplus beds were defined as the excess above and beyond what is generally considered necessary to meet seasonal variations, unexpected situations, etc.

Everyone agreed that physicians and Blue Shield must work together—now more than ever before. Dr. Hagood promised that he would meet at intervals with Mr. Flory in an effort to improve communications. One such meeting has already been held with encouraging results. A question was raised as to whether Blue Shield would permit The Medical Society of Virginia to review similar advertising in the future. Mr. Flory stated that he could not speak for his Board at this time.

People to People.

Dr. Weyl announced that a "People to People" tour of Russia and other European countries is being arranged for the fall of 1978. It was recalled that a similar trip was conducted under the leadership of Dr. Martin last year. Dr. Weyl discussed the "People to People" program and how it began through the support of President Eisenhower. The program has been quite effective in bringing professional people of all countries closer together. The 1978 venture will be limited to approximately 40 participants and will be for a period of 21 days.

Legislative Intern Program.

The Society has participated in a special legislative intern program during the last two sessions of the General Assembly. The young people employed have been extremely helpful to Mr. Osburn and Mr. Goolsby, and it has been proposed that the Society participate in the program again in 1978.

The cost to the Society would be approximately $500-$600. It was felt that this would be a worthwhile investment in view of the fact that we would have the services of the young person selected for at least nine weeks. The Executive Committee had given prior consideration to the matter and recommended that the Society continue its participation in the program. A motion to adopt the recommendation was seconded and carried.

Marijuana.

Dr. Weyl expressed concern over a joint statement recently released by AMA and the American Bar Association calling for modification of those laws having to do with the use of marijuana.

It seemed to be the consensus that AMA might well have gone too far and that a strong objection seemed in order. Brought out was the fact that the AMA House of Delegates. in 1972, had adopted a very clear and forceful statement on marijuana.

A motion calling for reaffirmation of the 1972 action by AMA was seconded and adopted.

The Abortion Issue.

Dr. Jackson inquired as to the possibility of reconsidering Council's earlier decision to take no action on the question of whether public funds should be withheld "for specific medical services that would deprive any segment of the citizens of this Commonwealth from medical care to which all other citizens are legally entitled".

Although a motion to reconsider was in order, none was forthcoming.

There being no further business, the meeting was adjourned.

Robert I. Howard, Secretary

APPROVED:
William J. Hagood, Jr., MD, President

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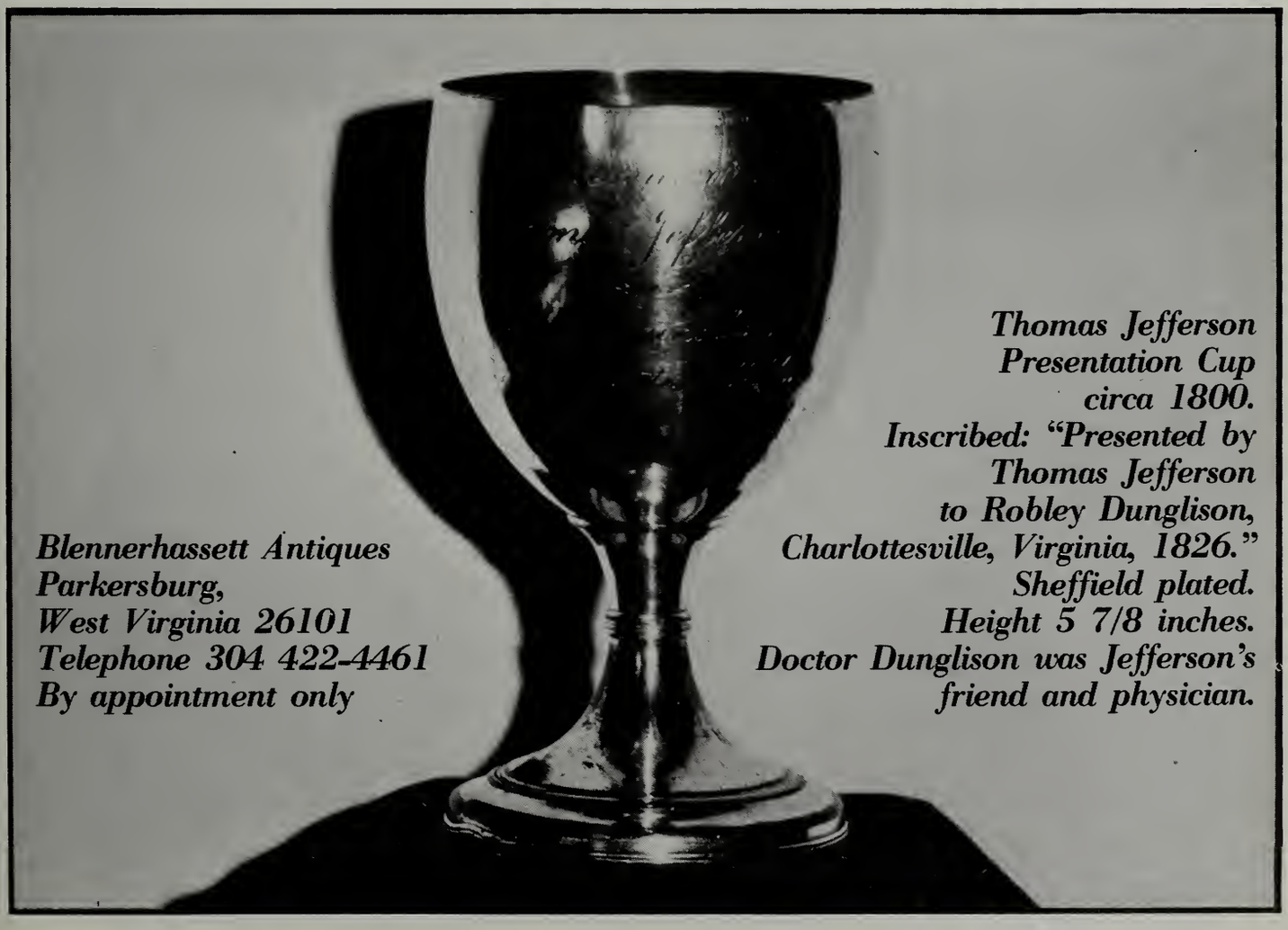
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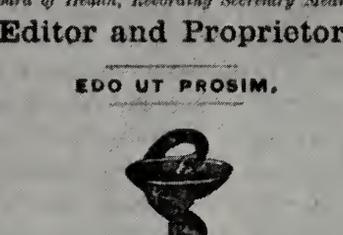
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Medical Monthly.

LANDON B. EDWARDS, M. D.,

Member of the Va. State Board of Health, Recording Secretary Medical Society of Virginia, &c.

Editor and Proprietor.

EDO UT PROSIM.



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RICHMOND, VA.

VIRGINIA MEDICAL

EDITORIAL

Gunshot Wounds: A Call to Inspect Arms

ANY major cause of death and disability deserves physicians' concern. In the 1950's our concern for automobile accidents provoked engineers to make safer vehicles and highways. As a result, many injuries which occupied hospitals and graves 20 years ago are now rarely seen. Of this accomplishment physicians may be proud. We cannot be proud, however, of our influence on an equal threat to life and health, the threat and consequence of gunshot wounds.

Six years ago the surgical service at the Medical College of Virginia was overloaded with victims of bullets. They provided superb training in critical care and wound management but were a terrible waste of life and taxpayers' money. Moreover, we were told by European surgeons the waste was unnecessary, not an inevitable part of the human condition but a peculiarly American disease.

We therefore sought to define the real extent of the problem. To our surprise, we found that state and local police kept no records of the incidence of bullet wounds in Virginia. We therefore persuaded our MSV Delegate, Dr. W. Ferguson Reid, with the support of The Medical Society of Virginia and the State Health Department, to offer a bill which made any gunshot wound a reportable illness. His bill was passed, and for two years Virginia physicians helped the Health Department collect what appeared to be accurate data. In 1975, 2,292 wounds were reported.

This effort was designed as a scientific test to determine whether or not there was a problem, and, if there was one, to define its nature and magnitude. It was not meant as propaganda for or against pistol control. Those of us who treat wounds and sign death certificates know better than gun lobbyists that the cause of death is not simply pistol salesmen, manufacturers, or state officials who have helped locate a pistol factory in Virginia. Among the causes we perceive or suspect are alcohol, drugs, illiteracy, unemployment, infidelity, and television violence. Perhaps the most fundamental cause is that people have lost the skills and confidence to defend themselves with their words or fists. If bullet wounds are a coward's substitute for sharp words or bare knuckles, the remedy might be to provide classes in rhetoric or boxing. Any acceptable remedy, however, must be safer than the problem, so first we must carefully define the problem.

Whether or not Virginia will be able to define this problem is now doubtful. In 1975 Dr. Reid's law was amended to require reports of *all injuries* unlawfully inflicted. In 1976 nearly 10,000 reports were received, and the Health Department has not yet been able to collate them. The impracticality of the new law may

have been foreseen by its author, who kept its passage secret from the Society and the Health Department. In its passage, physicians were tricked and the search for data was delayed.

The problem of gunshot wounds, however, is still with us, as it is with the rest of the nation. On September 8, 1977, the *New England Journal of Medicine* published a thorough analysis of gunshot wounds in Cleveland[1], a report of mortality in Massachusetts[2], and an editorial calling on physicians to show special interest in the form of human pathology, saying, "opinions must reason on objective data, carefully gathered and critically interpreted"[3].

It may be that good data are in our Health Department waiting to be collated. Whether we can ever interpret it remains to be seen. Virginia may ultimately be forced to act upon data collected elsewhere or to accept remedies imposed by other states. In any case physicians must use what facts are available, leading others to better understand the problem and to better judge proposed remedies. We must scientifically inspect arms, weigh their cost to our health, and share what we learn with our fellow citizens.

Hunter H. McGuire, MD

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3. Relman SA: More than sutures and transfusions. N Eng J Med 297:552-553, 1977

Marker Commemorates Early Virginia Surgeon

The role of Dr. William Rickman as Director and Chief Physician of Continental hospitals in Virginia and the Virginia home in which he lived, "Kittiewan," has been appropriately marked by The Medical Society of Virginia. A metal historic marker has been erected on Route 5 near Charles City Court House.

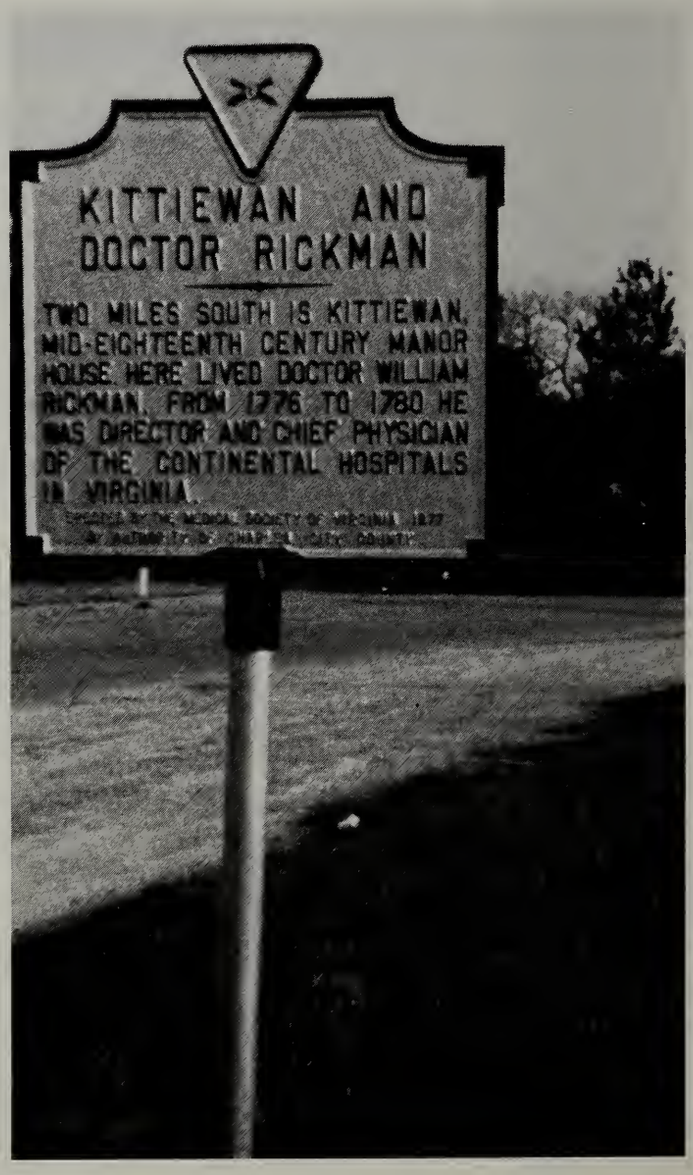
Doctor Rickman was senior physician in the Continental Army in Virginia for more than three years during the War for Independence. He had the title of colonel, and his widow received a grant of 6,666⅔ acres in present-day Ohio and Indiana for his wartime services. An article in the Bicentennial issue of this journal[1] dealt with Doctor Rickman's early life as a ship surgeon in the British navy and his later contributions in Virginia during the American Revolution.

The present owners of Kittiewan, Mr. and Mrs. William E. Cropper, gave a reception at their home on Sunday, November 27, 1977, to commemorate the long-overdue recognition of the activities of the surgeon and his remarkably well-preserved 18th century home. Mr. and Mrs. Cropper asked the members of the Committee to thank The Medical Society of Virginia for its services in erecting the marker and extended an invitation to members of the Society to visit their historic home.

H. J. Warthen, MD

1. Warthen HJ. Doctor Rickman and Virginia's Continental Surgeons. Va Med Mon 103:498-504, 1976

Dr. Warthen is chairman of the MSV Bicentennial Committee. Dr. Raymond S. Brown and Robert I. Howard are committee members.

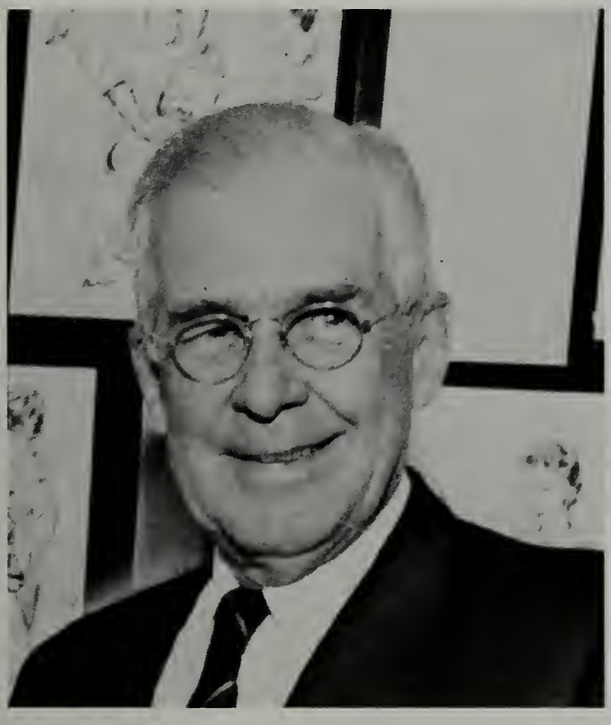


VIRGINIA MEDICAL OBITUARY

Carrington Williams, Sr., MD

Dr. Carrington Williams, Sr., Richmond surgeon and President of The Medical Society of Virginia 1954–1955, died January 3 in a Richmond hospital. He was 88 years old.

A native of Richmond, Dr. Williams was graduated from McGuire's University School, Richmond, and the University of Virginia School of Medicine, Charlottesville. He trained at St. Luke's Hospital, New York, and then saw World War I service with the surgical division of Base Hospital 45 in Toul, France, under the command of the late Dr. Stuart McGuire of Richmond. Returning to Richmond, Dr. Williams joined Dr. McGuire in the organization and operation of the then nascent McGuire Clinic; except for two brief intervals when he practiced independently, he continued this association until 1944, when he joined the staff of Stuart Circle Hospital, practicing surgery there until his retirement in 1967.



Carrington Williams, Sr., MD
President 1954–1955
The Medical Society of Virginia

Dr. Williams was also a teacher of medicine. He was appointed professor of clinical surgery at the Medical College of Virginia in 1939 and served as interim chairman of the MCV department of surgery from 1955 to 1958.

His excellence as a leader was recognized not only by The Medical Society of Virginia but by the Richmond Academy of Medicine, the Southern Society of Clinical Surgeons, and the Southern Surgical Association, each of which he served as president. He also belonged to the Eastern Surgical Society and the American Surgical Association, was a fellow of the American Board of Surgery, and was for several terms MSV delegate to the American Medical Association.

On Dr. Williams' accession to the MSV presidency in 1954, this journal published an editorial describing his attributes. It read in part: "He is one of those rare individuals who has endeared himself to a host of friends and patients by his cordial manners, his ability to inspire confidence, and by his obvious mastery of the skills of his profession."

Dr. Williams' two sons are Virginia physicians: Dr. Carrington Williams, Jr., Kilmarnock, and Dr. Armistead Marshall Williams, Richmond.

Thomas Walton Green, MD

Dr. Thomas Walton Green, Bristol internist for almost a quarter of a century, died of cancer on November 6, 1977, at Bristol Memorial Hospital. He practiced in association with a brother, Dr. Waverly Sydnor, and a son, Dr. Thomas Walton Green, Jr.

Born in Burkeville, Virginia, Dr. Green was educated at the University of Richmond and the Medical College of Virginia. He interned at the US Naval Hospital, Portsmouth, and served with the US Navy for two years during World War II. A fellowship at the Johns Hopkins School of Medicine, Baltimore, gave him four years of study after his naval service. He then entered private practice, first, briefly, in Richlands, Virginia, and then in Bristol.

Dr. Green was an energetic leader in professional and community endeavors in Bristol. He had been president of the Southwestern Virginia Medical Society; chief of staff of Bristol Memorial Hospital; president of the Bristol Heart Association; medical director of the Bristol Life Saving Crew; director of the United Fund; director of the Bristol Crisis Center; director of the Fred Richardson Memorial Scholarship Association and team physician at Bristol Tennessee High School; deacon and elder in the Bristol

Presbyterian Church. Additionally, he was on the faculties of both East Tennessee State University and the University of Virginia.

He was a diplomate of the American Board of Internal Medicine and a fellow in the American College of Physicians and the American Society of Hematology. Dr. Green's memberships included The Medical Society of Virginia, the American Medical Association, and the Tennessee State Medical Association.

Patrick H. Winston, MD

Dr. Patrick Henry Winston, at 76 years the oldest practicing physician in Mecklenburg County, Clarksville, died October 6, 1977.

Dr. Winston attended Oak Ridge Military Academy, received his BS degree from the University of North Carolina, and attended Wake Forest College for two years. He received his medical degree from the Medical College of Virginia. As an undergraduate, he worked at North Carolina State Hospital, Raleigh, with his first full practice in psychiatry. He served in the army during World War II and established a general practice in Clarksville in 1936. Until recently he also maintained an office in Townsville, North Carolina.

In 1950 Dr. Winston became Mecklenburg County's medical examiner, a post he held until his death. He was a member of the Southside Virginia Medical Society, Grassy Creek Baptist Church, and Adoniram Lodge No. 149 in the Cornwall community of Granville County.

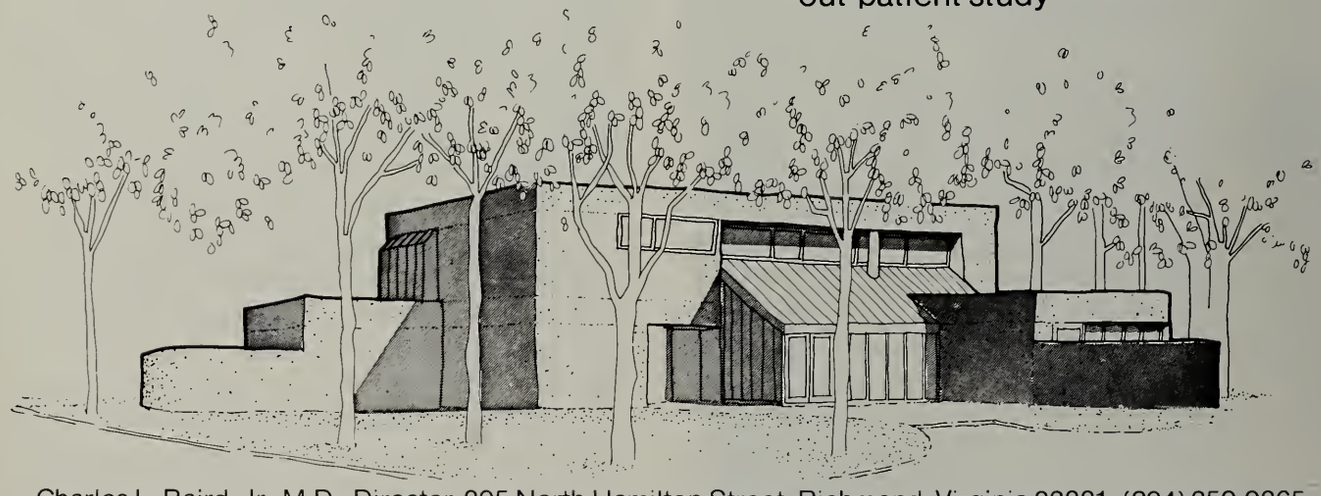
Arthur W. D. Mears, MD

Dr. Arthur Wainhouse Downing Mears, general practitioner in Belle Haven, died November 12, 1977, at the age of 54 years. A lifelong resident of Belle Haven, Dr. Mears was educated at Hampden-Sydney and William and Mary Colleges and took his medical degree at the Medical College of Virginia. He had been a member of The Medical Society of Virginia for 22 years.

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THE AUXILIARY

Members of the Auxiliary to the Northampton-Accomack Medical Societies look beyond Virginia's horizons with two continuing projects that have brought them friends around the world. One is the International Book Project, which "recycles knowledge" by sending used medical journals and books to doctors, schools, and libraries in such faraway places as India, Brazil, and Indonesia. The other is World Medical Relief, which channels supplies for the sick to needy countries.



Above, Mrs. William F. Bernart (left) and Mrs. William S. Burton pack medical books collected by auxilians.



Standing by a station wagon weighted with parcels of books ready to be shipped overseas are, left to right, Mrs. Edward White, Mrs. William S. Burton, Mrs. E. M. Kellam, and Mrs. Otis W. Doss.

Below, Mrs. Philip M. Gleason fills a hygiene kit for World Medical Relief.



WHO'S WHO

THE DOCTOR'S eyes, usually lively with good humor, were pensive as he looked at the typescript of his speech. "Lots of members won't like this," he reflected. "But I feel it should be said."

That's Raymond S. Brown, MD: sensitive to another fellow's point of view and friendly to it, but courageous in stating the other side of the coin when he is convinced it needs hearing. It is a code of honor with him, and he'll let his popularity ratings go hang in order to be faithful to it.

His popularity has never suffered, however, partly because his opinions show such a rare capacity for reason and partly because his modesty and good will make him such a likeable man. When he was named winner of the A. H. Robins Award for Community Service at the Annual Meeting in Richmond, his peers in the audience rose to give him their biggest applause.



Raymond Sidney Brown was born in Gloucester, Virginia, and he lives and practices in Gloucester today. He took first a BS in pharmacy and then an MD at the Medical College of Virginia, and served his internship at the Naval Hospital, Norfolk. After service as a medical officer with the US Navy in World War II, he began his family practice in Gloucester.

The minute his practice began, so, too, did his community service, for Raymond Brown's sense of responsibility has broad horizons and great energy. In most of the organizations he entered, he rose to the top. As president, director, or chairman he has led The Medical Society of Virginia, the Mid-Tidewater Medical Society, the Hampton Roads Academy of Family Practice, the Gloucester Rotary and Lions Clubs, the Ware Episcopal Church Men's Club, the Virginia Tuberculosis Association, the local chapter of the American Red Cross, the Gloucester Library Fund, the F. N. Sanders Nursing Home—his leadership encompasses his personal values. Throughout, he has shown an unfailing humanity: He responds quickly to every letter, listens carefully to every plea, receives thoughtfully every presented idea.

In the spring, Doctor Brown and his pretty, animated wife, Elizabeth, come into MSV headquarters with great armfuls of daffodils, gathered from the spacious grounds of their home on the Ware River; for days afterwards these sunny blooms are an appropriate reminder of the couple, for each projects a generous warmth. They have three daughters: Mrs. Herbert Sebren, Jr., of Tappahannock, Virginia; Mrs. Kieran Quinn, of Nyack, New York; and Cecilia Brown, who is still at home to go sailing with her father when he can schedule a few hours for his favorite outdoor activity. Indoors, reading is for him an emotional need; he is a student of the history of the English language, which may explain in part his own powers of articulation, and he likes the fun of science fiction.

The Medical Society of Virginia does not lack for members of distinguished contribution to their communities. The physicians who have won the A. H. Robins Award since its inception in 1963, however, are truly select. In Doctor Brown they have met their match. A. G.

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Letter from the President:

Three years ago, I wrote to my friend, Tom Delegate, and the letter appeared as a guest editorial in this publication. Tom hasn't answered yet, so I rewrote the letter because I firmly believe in the importance and timeliness of the issue it addresses. *W. J. H., Jr.*

Thomas J. Delegate, MD
The Medical Society of Virginia
1619 Burgess Lane
Dominion, Virginia 16017

Dear Tom:

We need especially trained professionals working full-time for us.

Let me explain.

In the last thirty-five years, which have passed so rapidly since many of us left medical school, our profession has remained erect and has functioned well despite the many dramatic and restrictive legal changes that came from north of the Potomac or from our state capitol. There is hardly a facet of medical practice that is not touched and changed by laws coming from both seats of government. The tide of regimentation flows—not ebbs.

Tom, we've watched "organized medicine" fight one delaying action after another through the last three decades. And, after each crisis, a little more of the physician's prerogative to practice medicine is gone. Our very best representatives have been no match for the professional legislator or career bureaucrat in the battles. But, Tom, it would be totally foolish not to get involved in those battles. The ones going on right now in Washington and Richmond will have an even greater impact on our medical way of life. We had best get with it.

Now, back to the trained professionals we need to work full-time for us. Those who can enhance our personal involvement.

Medical schools spend many hours and much money determining which candidates will enter freshmen classes but no time and no money helping students find the field of medicine best suited to them. This absence has resulted in too many people in one field and not enough in another. It has also precluded

the identification of the specialty field of Medical Legal Administrator (MLA).

The MLA is one who is trained in medicine and also trained in those portions of law and business administration applicable to administering a local, state, or national medical organization in today's world. This physician would not replace our lay executives, who have well-defined jobs within the structure of my idea.

The job of the MLA would be to bird-dog Washington as well as state capitols and their legislative, executive, and judicial branches, and then interpret the designs of elected officials and bureaucrats to the doctor at the professional organizational level. The MLA would then prepare a plan of action, train a select group of doctors, and then lead them.

The job of the MLS is to initiate approaches to sound, long-range planning, work with other types of professionals to nuture the ideas into feasible plans, and then rally the appropriate people, including the public, to put them into action.

The MLA could share the responsibility of producing an informed membership; teach medical students and tell them of organized medicine's responsibility to them and their responsibility to it.

The MLS would interpret—between doctors, lawyers, and the public. And, too, an MLA must touch patients, keep his feel of and concern for their needs, through a special type of practice.

The candidates for this specialty are not great in number, nor will every medical school provide MLA training. However, I submit that Virginia Commonwealth University has most of the makings to develop a high quality program if a necessary arrangement were made with the T. C. Williams Law School. It is possible for Eastern Virginia Medical School and William and Mary College to develop such a career course. The University of Virginia has all the necessary ingredients now.

Think it over, Tom, the seeds should be planted right now. The idea should be considered in The Medical Society of Virginia's House of Delegates. Matter of fact, Tom, we should have planted the seeds years ago and have harvested the first crop long ago.

Sincerely yours,
William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

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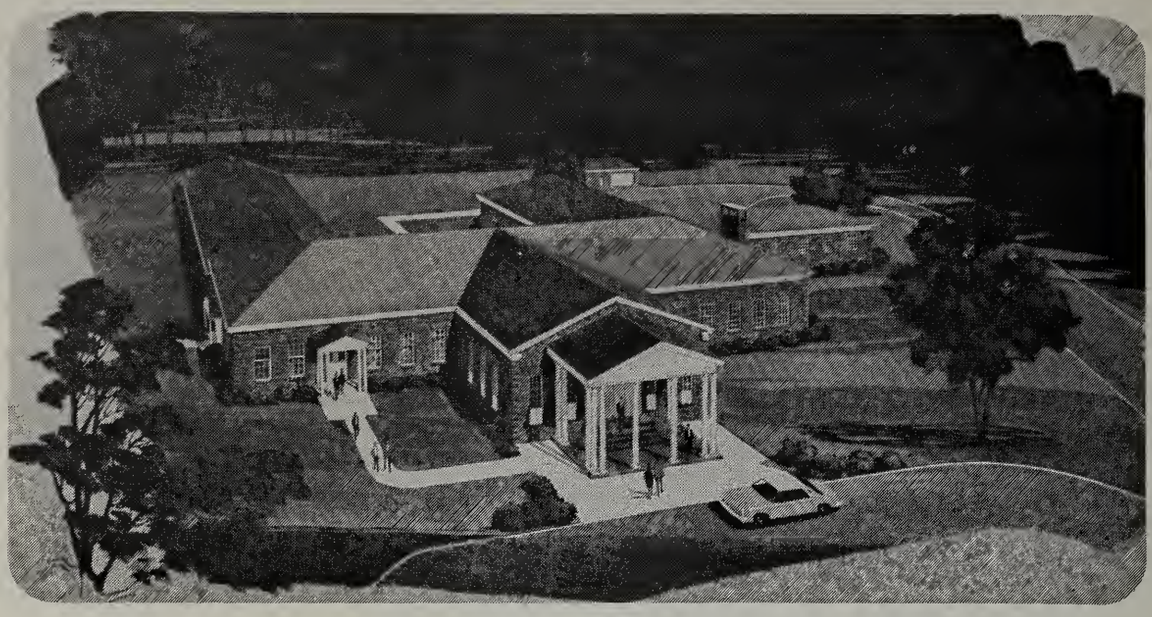
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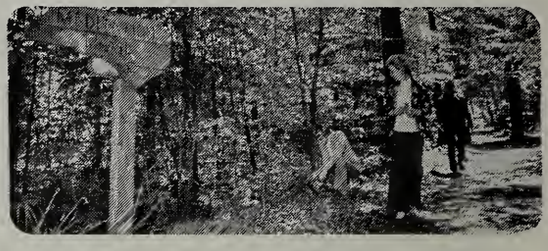
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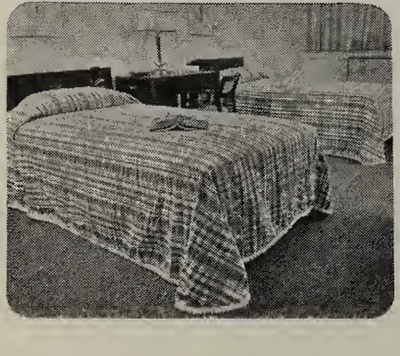




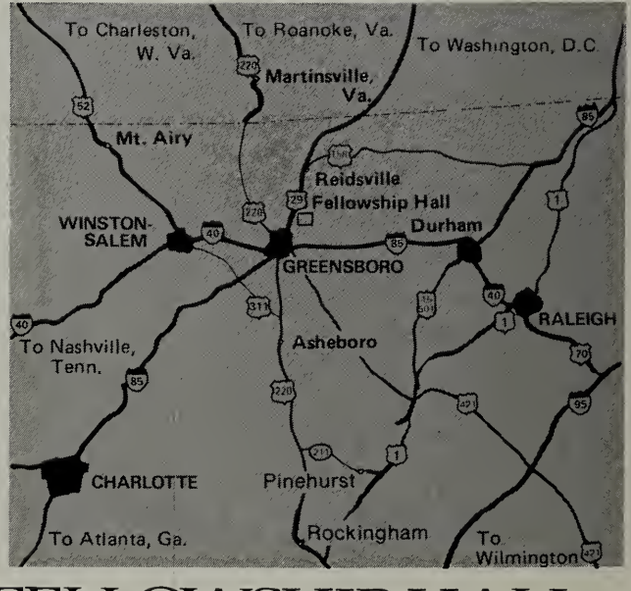
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Gastroenterology, Annual Clinical Conference of Louise-Obici Hospital, moderated by Dr. Charles M. Caravati, Sr., Shrine Club, *Suffolk,* April 5. Dr. George J. Carroll, Box 1100, Suffolk VA 23434.

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(*Continued next page.*)

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The Child and Adolescent with Spinal Cord Injury, sponsored by the **Children's Rehabilitation** Center and Division of CME, University of Virginia, *Charlottesville,* June 1. Anne Raynor, Conference Coordinator, 804 924-5161.

VIRGINIA MEDICAL
MARCH 1978

Charles Lindbergh's Achievements in Science

Ranes C. Chakravorty, *Salem, Virginia*

The famous aviator was drawn to biology, where his development of a pump for the perfusion of organs was significant in its time. He also made the first collections of atmospheric microorganisms.

CHARLES A. LINDBERGH's career as an aviator has been widely documented, but his involvement in biological research has received scant attention.

"Carrel, Lindberg Develop Device to Keep Organs Alive Outside Body." That was the headline on the front page of the New York *Times* on June 21, 1935. National newsmagazines also carried the story; they ascribed Lindbergh's interest in a perfusion machine to the death of an aviator friend of his. In this they were wrong. Lindbergh's motivation in the undertaking was given later in his preface to the English translation of Carrel's book, *The Voyage to Lourdes.*[1] In the summer of 1920, he related, a close relative of his developed subacute bacterial endocarditis. "Knowing nothing of the delicacy of human tissue or of the coagulative properties of blood, it seemed to me that a mechanical heart should not be too difficult a problem of design. If the circulation of blood could be maintained artifically for a few minutes, then why couldn't the heart itself be stopped and its lesions removed by the surgeon's scalpel."

He had been introduced to Alexis Carrel, Nobel Laureate and member of the Rockefeller Institute for Medical Research, in 1930, this by courtesy of Dr. Paluel J. Flagg. Dr. Flagg was one of the pioneers of cardiopulmonary resuscitation and had been the anesthetist at the birth of the first Lindbergh child.[2] The introduction initiated a close association, which culminated eight years later in the publication of the book, *The Culture of Organs.*[5]

The beneficial effects of pulsatile pressure had been realized many years earlier. Belt, Smith and Whipple[3] had discussed the factors concerned in the perfusion of living organs in great detail in 1920, citing 66 articles published to that date on the subject; these authors summarized their experience by stating, "Physiological perfusion of organs is a matter of great difficulty. Much of the work done with organ perfusion is of little value because proper appreciation of the limitations of the method does not obtain among laboratory workers." The history of artificial organ perfusion was reported in detail by Lindbergh in one of his articles.[4]

In his initial years of experiment, Lindbergh designed apparatus to circulate liquid under constant pressure in a closed system. It was a helical pyrex tube that was driven by motor around a vertical axis. This caused centrifugal ascent of the perfusate to the artery of the isolated organ, which was suspended from the top. The nonpulsatile flow was, however,

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Charles Lindbergh circa 1934, when he was working with Dr. Alexis Carrel at the Rockefeller Institute for Medical Research. *Courtesy the Rockefeller University Archives.*

inadequate. The 14-line unsigned communication describing the apparatus was Lindbergh's first report from the Rockefeller Institute,[5] where he conducted his research. In the next year, he described a method for washing corpuscles in suspension.[6]

The final version of the pump was achieved in 1935 and was driven by a stream of pulsating compressed air. A mixture of oxygen, carbon dioxide, and nitrogen circulated and oxygenated the perfusate and made it pulsate by a stream of compressed air, which was modified by a rotating valve. The details of the apparatus, the method of using it, the composition of the perfusate, and other details are given in the book Lindbergh coauthored with Carrel.[7]

The chapters written by Lindbergh for this book have the precision, brevity, and clarity of expression typical of his journal articles. The imprint of the philosophy of Carrel is also clear in the pages. A portion of the concluding chapter shows the goals of the collaborators: "It happens today that organs removed from the human body, in the course of an operation or soon after death, can be revived in the Lindbergh pump and made to function again when perfused with an artificial fluid. . . . When larger apparatus are built, entire human organs, such as pancreas, suprarenal, thyroid and other glands, may be caused to set free their secretory products in their circulating medium. . . . Thus human organs would manufacture in vitro the substances supplied today to patients by horses or rabbits. . . . We can perhaps dream of removing diseased organs from the body and placing them in the Lindbergh pump as patients are placed in a hospital. Then they could be treated far more energetically than within the organism, and, if cured, replanted in the patient. . . . However, the really important applications of the method will not be in the field of surgery . . . [for] thus will be discovered the nature of the specific chemical demands by a given organ for its growth and normal function."

The pilot article on the Carrel-Lindbergh apparatus was published in *Science*[10] and evoked the publicity noted above.

Many laboratories in this country and abroad used the pump after its initial appearance. The association of Carrel and Lindbergh continued until the latter's death in his native France in 1941, although Lindbergh himself had become immersed in other projects; from 1935 to 1939, when Carrel retired from the Institute, Lindbergh's involvement in whole organ perfusion gradually declined. He was basically an engineer and not a biologist.

The pump has not lived up to its early promise, the last published article dealing with its use appearing in 1966.[11] The apparatus was indeed capable of keeping organs alive for prolonged periods in a totally isolated milieu; but, after a few weeks, there were gross pathological changes in the organs perfused, making them unfit for physiologic study.[12] Newer methods both of studying slices of whole organs and of tissue culture (in which Carrel was a pioneer) also have made the comparatively cumbersome "Lindbergh pump" less applicable.

Apart from his perfusion experiments, Lindbergh also carried on extensive aerogeographic studies. In 1933, he and his wife flew across Greenland, Labrador, and the North and South Atlantic to survey routes for possible commercial flights. During these travels, Lindbergh sampled the air for spores and microorganisms in the upper atmosphere.[11] This collection of atmospheric microorganisms was the first of its kind to give concrete evidence of the part played by air currents in distribution of fungi. For this research he developed an instrument called a "skyhook". It was attached to the airplace to sample the air. Lindbergh's interest was more than that of a pilot who was incidentally collecting air samples; this is indicated by an entry in his wife's diary of July 17, 1932: "C. and I alone all day, he studying bacteriology . . ."[12]

Lindbergh asked for no official recognition, and, during the years of his association with the Rockefeller Institute, remained largely unknown there. His



Lindbergh's perfusion pump for the culture of tissues. *Courtesy the Rockefeller University Archives.*

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modesty and self-effacement are remembered.[13] A colleague of the Institute writes: "My first meeting with Colonel Lindbergh was amusing. The several buildings of the Institute were joined by an undergound tunnel. None of the exits was marked. I was in the tunnel one day and met this stranger. As was the practice, I said, 'Good morning'. The stranger responded and said, "How do I get out of here?" I asked where he wanted to go and gave him directions. It was hours later before it dawned on me who the stranger was. Later, at lunch, I kidded him about how anyone could get lost in a tunnel and still fly the Atlantic. He responded that his ability to get lost was one reason he had always carried a parachute while flying the mail."[14]

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Axillary Lymph Nodes as Occult Site of Breast Cancer

Robert Kay Heide, MD, *Norfolk, Virginia*

The author discusses a case of axillary node metastasis presenting as the initial indication of breast cancer and documents the diagnostic clues and therapeutic course.

THE DETECTION of metastatic carcinoma in lymph nodes may be the only indication of the presence of cancer in a distant organ. Virchow's node in the supraclavicular node is associated with intra-abdominal neoplasms, enlarged upper cervical lymph nodes are related to cancer of nasopharynx or hypopharynx, and affected lymph nodes in the lateral neck region are involved with cancer of the thyroid. Many cases of axillary node metastasis presenting as the initial indication of breast cancer have been reported recently. Metastatic nodes may develop as much as four years prior to clinically detectable appearance of the primary "occult" tumor; at the time of presentation, the patient usually feels healthy and is asymptomatic except for the presence of an axillary mass.

This case report is illustrative of metastatic carcinoma of axillary lymph nodes and suspected related involvement of the breast. Review of the literature indicates that the preferred treatment for this condition is a radical mastectomy; in some cases, a simple mastectomy, accompanied by meticulous node resection (even in the absence of a mass in the breast), is recommended. In all cases, a thorough study should be made to exclude a primary tumor in another part of the body.[1,2]

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Submitted 1-18-77.

Case Report

A 47-year-old black female presented with a nodule in the right axilla. She had discovered the nodule after noting some discomfort in the shoulder area during arm movement. She denied having had any recent infections involving the arm, hand or fingers. She had no systemic or constitutional symptoms, and her health had been excellent. She had lost no weight. She reported no fever, chills or loss of appetite.

She had undergone a tonsillectomy, hemorrhoidectomy, and abdominal hysterectomy for a fibroid tumor in the past. In 1966, she had a partial thyroidectomy for a benign adenoma of the thyroid.

Her family history was unremarkable except for the fact that four of her sisters have adult-onset diabetes; they are treated for the condition with oral agents. The patient neither smokes nor drinks. She had taken diazepam (Valium) 5 mg tid on a prn basis. Her review of systems was completely negative.

Physical Examination: The examination showed a healthy, well-nourished female. Her blood pressure was 140/80. Head, ear, eye, nose and throat exams were normal. There was a thyroidectomy scar on the lower neck; there were no masses, adenopathy or thyromegaly. Chest, heart, abdomen and extremity examinations were normal. Pelvic examination showed a normal introitus, and the cervix and uterus were absent. Both adenexae were completely normal. Meticulous examination of the breasts was com-

This section on diabetes mellitus
is separately bound and
will detach for your reference.

pletely normal. There was a 2x4 cm discreet, firm, fixed tender mass in the right axilla.

The initial impression of the mass was that it was an inflammatory mass because of the tenderness, and the patient was asked to return in two weeks for reevaluation. At the time of the second visit, the mass was decreased in size and was no longer tender. Breast and abdominal examinations were repeated; again, they were normal. The patient returned after another two-week period; the mass then appeared to be no smaller and, perhaps, slightly larger. The patient was then admitted to the hospital for biopsy and further investigation, During the four week-interim, she had gained three pounds in weight and had remained completely asymptomatic.

Laboratory Data: The laboratory evaluations showed a WBC of 4900 with 54% polymorphonuclear leukocytes, 3% eosinophils, 33% lymphocytes, 1% basophils. The hemoglobin was 10.9 mg/dl, hematocrit 32%. Red blood cell indices were normochromic and normocytic. Total serum proteins, calcium, cholesterol, uric acid, alkaline phosphatase, SGOT, LDH, VDRL, T_4, glucose 6-phosphate dehydrogenase, reticulocyte count, LE prep and urinalysis were all either negative or normal. A carcinoembryonic antigen test showed 1.4 ng/ml. The alpha-fetoprotein test was negative.

A bone marrow aspiration revealed active bone marrow with adequate bone marrow iron and borderline nonatypical lymphocytosis of the marrow. A PPD intermediate skin was normal. Chest x-ray, barium enema, intravenous pyelogram, gall bladder series, upper GI series and small bowel followthrough were negative or normal, as were the gallium scan of the chest, hypotonic duodenography and bone scan examinations. Bilateral mammograms and xeromammography of the right breast were also normal.

During the patient's hospital stay, a biopsy of the nodule in the axilla showed a 4x3.5 cm mass of matted, rubbery lymph nodes. Microscopic examination of the nodes showed metastatic carcinoma containing mucin-type vacuoles in the cells; these were suggestive of a primary tumor site in the lung or gastrointestinal tract. Special stains of alcian blue and mucicarmine were done and the results indicated mucin production by the tumor cells. These tests seemed to rule out the possibility of malignant melanoma, renal cell carcinoma and carcinoma of the thyroid.

Therapeutic Course: There was much difficulty encountered by the consulting physicians with regard to demonstration of the primary source and site of the tumor. In discussing the appropriate approach to be taken in diagnosing the primary source and site so that the chemotherapy could best be tailored to the patient's needs, it was decided that a gastroscopy should be done. The results of the gastroscopy showed a completely normal esophagus and stomach; multiple "blind" biopsies of the mucosa were taken, and all were histologically normal. The consensus among the consultants then was that the most likely site of primary tumor was the right breast; it appeared that the patient had the syndrome of "occult carcinoma of the breast." The normal result obtained in the carcinoembryonic antigen test lent support to the assumption that there was no gastrointestinal malignancy with liver involvement.

Surgery was performed and a radical right mastectomy done, with careful removal of all of the right axillary lymph nodes. Pathologic study of these lymph nodes showed the majority of them to be infiltrated with tumor. The nodes were approximately 3 mm to 2 cm in size. The entire breast was carefully sectioned and examined by several physicians. Despite assiduous scrutiny, no malignant tissue was found in the excised breast.

The consultant chemotherapists remained concerned that the tumor cell type more closely resembled gastrointestinal cell types than any of breast origin. Therefore, after deliberation, the patient underwent an exploratory laparotomy, and a meticulous examination of the abdominal and pelvic cavities

(*Continued on page 219.*)

VIRGINIA
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Diabetes Mellitus Updated: Standards of Quality Care In Office and Hospital Practice

By
Robert M. Carey, MD, William F. Tompkins, MD, Jeffrey K. Russell, MD, Stephen L. Pohl, MD, George C. Newman, MD,PhD, Elsa P. Paulsen, MD, Charles W. Lomax, MD, and John A. Owen, Jr., MD,
Charlottesville, Virginia

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PHYSICIANS rendering care to the diabetic patient must make a series of decisions at the level of diagnostic evaluation, office and hospital management, and rehabilitation, and not once but over and over again throughout the professional relationship. Because both the patient and physician are continually evolving in their understanding of the state of the art and their focus of interest on the diabetic problem, these decisions will not necessarily be the same from one year to the next. Furthermore, while the primary goal of therapy is obviously the reversal of all of the metabolic disturbances of diabetes, this goal is completely unattainable at present because of technological limitations. Thus decision-making in a practical sense is restricted to second- or third-order problems, a situation deeply frustrating for both the general physician and for the specialist who cares for diabetic patients.

Recommendations to assist in decision-making may be found in profusion in the scientific literature. We have endeavored to identify as well as to evaluate the documented evidence which bears on these decisions. Further, we have considered the practical problems of transforming idealized standards into reasonable criteria for all levels of diabetic care. We have emphasized the areas where information is inadequate, indicating potentially important areas of research, in addition to the more controversial issues wherein criteria of good medical care can be established with some assurance. The ultimate test of these criteria will be the outcome of patients whose treatment conforms to these standards; by measuring the impact of the standards on the process of care and the outcome variables, both quality of care and quality of criteria can be monitored.

This report reviews diabetes as a whole: its diagnosis and maintenance treatment; its extremes of hypoglycemia and hyperglycemia; its complications of retinopathy, nephropathy, neuropathy and cardiovascular disease; and its complexities associated with management of diabetes in childhood and adolescence, intercurrent infections, pregnancy, and surgery. Each topic includes a brief discussion of the clinical problem, its natural history, and the effects of treatment in terms of benefit, risk, and cost. Specific recommendations are given for treatment by the primary physician and, when appropriate, for referral to a specialist or a center for specialized procedures.

From the Division of Endocrinology (Drs. Carey, Russell, Pohl, and Owen), the Department of Internal Medicine (Drs. Tompkins and Newman), and the Department of Pediatrics (Dr. Paulsen) and Obstetrics (Dr. Lomax), the University of Virginia School of Medicine, Charlottesville. The authors comprise the Committee on Diabetes of the Experimental Medical Care Review Organization of the Albemarle County Medical Society, Charlottesville, and this article is their report.

Supported by a grant (HS-00808) from the National Center for Health Services Research and, in part, by the NIH/University of Virginia Diabetes-Endocrinology Research Center (AM-17042).

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Definition and Diagnosis

Diabetes mellitus, as we know it, includes a variety of syndromes having in common hyperglycemia and, usually, abnormalities of fat and protein metabolism. This complex disorder represents a failure of normal storage and mobilization of fuel, resulting in an accumulation of fat and/or glucose in blood. Diabetes may arise from more than one cause and may vary in severity from patient to patient; these variations in turn affect goals and techniques of management.

Making a diagnosis of diabetes mellitus is not difficult when a patient presents with a typical diabetic syndrome and hyperglycemia. Diabetes may also be clinically silent, however, and the oral glucose tolerance test (OGTT) is widely used to diagnose asymptomatic diabetes and to identify patients at risk of developing symptomatic diabetes or requiring treatment even though asymptomatic. Our survey of the literature reveals that there is very little data supporting the usefulness of glucose tolerance testing for these purposes.[1-4] These studies show the OGTT to have considerable less predictive value than has been customarily assumed.

Furthermore, there are numerous practical problems in administering and interpreting the test, such as 1) variation in the amount of glucose load;[5] 2) variation in the values accepted as normal[6-12] (Table 1); 3) deterioration of glucose tolerance with advancing age;[13-17] 4) non-specific effect of such variables as nutritional status, physical activity, time of day, state of health, and drugs; and 5) technical problems such as the method employed to measure glucose (plasma values are roughly 15% higher than values for whole blood). Two excellent reviews of this complex problem have recently appeared.[18,19] Thus the OGTT, long the clinician's mainstay in diagnosis, appears to have fallen from favor.

Recommendations: We recommend defining overt diabetes mellitus not by glucose tolerance testing but by persistent fasting hyperglycemia and the presence of any of the classical symptoms, e.g., polydipsia, polyuria, polyphagia, or weight loss. A value of 120 mg/dl for fasting blood glucose (140 mg/dl for plasma or serum glucose) is commonly cited as the

Table 1. Criteria for Oral Glucose Tolerance Test (Blood Glucose mg/dl)

Criteria	FBS	1 hr	1½ hr	2 hrs	3 hrs	Diagnosis Requires
Fajans and Conn	120	160	140	120	—	All values exceeded
US Public Health Service	110	170	—	120	110	Any three values exceeded (or FBS + 3 hr)
Joslin Clinic	110	160	—	120	110	Any value exceeded
Mosenthal and Barry	—	151	—	101	—	Both values exceeded
Siperstein (plasma glucose)	140	260	—	220	—	Any values exceeded
UGDP	A	B	—	C	D	A + B +- C + D = 500 mg/dl

Note: Plasma glucose is usually about 14% higher than whole blood glucose.

upper limit of normal.[1] However, it is important to realize that 120 mg/dl is an arbitrary and conservatively high value. It is probably preferable for each clinical laboratory to establish its own normal limit based on 95th percentile for the population served. An individual with all values below those recommended by the USPHS can safely be considered normal. This leaves a large group of patients with some elevated glucose values but without overt diabetes mellitus as defined above.

Although many authors have used borderline values to devise classifications such as pre-diabetes, chemical diabetes, latent, chronic latent, or sub- clinical diabetes, there is no evidence that a large proportion of such patients go on to develop overt diabetes.[1,2,20,21] Furthermore, an abnormal OGTT may become normal on repeated testing.[22] We prefer to identify these patients as having inappropriate asymptomatic hyperglycemia. This position avoids attaching the undesirable stigma of a diagnosis of diabetes mellitus to a patient who may not have the syndrome and also avoids the problem of identifying a patient as normal who may be statistically abnormal. These considerations are similar to those which have led Prout to propose a "borderline" category.[19]

The OGTT is widely over-used and over- interpreted. **We recommend** against its use 1) as a screening test for diabetes; 2) in evaluating problems such as peripheral neuropathy, nephrotic syndrome, or idiopathic edema; 3) in evaluating malabsorption (D-xylose is better); and 4) in patients with fasting blood glucose greater than 120 mg/dl.

In certain cases, glucose tolerance testing may be done 1) to identify the rare patient who should be treated even though asymptomatic; 2) to assist in the evaluation of other diseases affecting carbohydrate metabolism (e.g., acromegaly, hypoglycemia); 3) to evaluate glycosuria without fasting hyperglycemia; 4) to provide a parameter of clinical investigation; 5) in occasional patients whose renal threshold for glucose is unclear; 6) in selected patients as a tool to motivate them to lose weight; and 7) in certain pregnant patients as described in the section on special management problems.

The intravenous glucose tolerance test is rarely used except where glucose malabsorption is a major problem.[23] The cortisone-OGTT appears to have no use at present in routine clinical practice.

Assessment

Initial. Every patient with the initial diagnosis of diabetes mellitus should have a careful, unhurried evaluation emphasizing the following aspects: 1) role of precipitating or risk factors in diabetes; 2) presence of associated disease (which markedly affects prognosis); 3) presence of early complications of diabetes; and 4) factors influencing patient education and cooperation.

The initial history should direct questions toward a number of specific points, as listed in Table 2; duration of any symptoms mentioned should be noted accurately.

The physical examination should establish a precise baseline, even though diabetes produces few specific physical findings (often none at first). Certain areas of the physical exam should always receive special attention (Table 2).

Initial laboratory studies should include CBC, urinalysis, electrolytes, creatinine or BUN, uric acid, cholesterol, triglycerides, chest X-ray and EKG and, if indicated, creatinine clearance, 24-hour urinary protein and urine culture. Tuberculin skin testing is desirable.

Followup. Followup examinations are essential no matter how well or how poorly the disease is controlled, in order to: 1) assess degree of control and initiate steps to improve it; 2) monitor development of complications; 3) continue patient education; and 4) care for intercurrent medical problems. At each followup visit, each of these areas should be covered and current status documented. The record should also include 1) a complete list of all drugs taken (including anti-diabetic medication) since the last visit, noting their side effects if any; 2) a review of all the blood and/or urine glucose tests; 3) a listing of all the patient's problems, including symptoms of diabetes or its complications; and 4) any new problems since the last visit.

Physical examination should always include weight, blood pressure, funduscopic, cardiovascular,

neurological and podiatric examination. Laboratory evaluation is naturally a highly individual decision, but serum cholesterol, triglycerides, and creatinine, as well as 24-hour urinary protein and creatinine clearance, should be measured at least annually, blood and urine glucose more frequently. Tuberculin testing should be repeated every year or two.

We recommend 1) the items in Table 2 as a minimum for the initial evaluation of the new patient; 2) followup examinations about every 2-4 months; and 3) education of all patients to contact their physicians without delay whenever problems arise.

Management

Diet. Diet, an integral part of the overall plan, has the goals of 1) minimizing the exaggerated postprandial metabolic changes of diabetes; 2) reducing known risk factors associated with cardiovascular disease; 3) obtaining ideal body weight; and 4) avoiding hypoglycemia.[24-26] In diet planning, it is important to distinguish between the thin, juvenile-onset, insulin-requiring patient and the usually obese, maturity-onset patient, who needs no insulin to prevent ketoacidosis. In the first group, the goals of diet therapy are primarily to minimize postprandial glucose excursions and to prevent insulin reaction. In the second group, the goal of diet therapy is to restrict calories while providing adequate nutrition. Most patients in this latter category can achieve complete amelioration of their diabetes through diet therapy; in practice, however, the success rate is quite low.[26]

The modern diabetic diet permits fairly unrestricted carbohydrate intake but does restrict fat, based on the hypothesis, as yet unproven, that reduction of dietary fat will decrease the prevalence of atherosclerosis; but the lack of conclusive data to support this hypothesis often impairs patient acceptance of a low-fat diet.[27-29] A generous carbohydrate intake stimulates insulin production and increases insulin sensitivity.[30,31] We recommend that the diabetic patient be instructed authoritatively in a dietary program that will lead to maintenance of normal weight, regular eating habits, and avoidance of hypoglycemia and hyperglycemia.[32] The best way to achieve this is to begin with the foods appropriate to the patient's habits, culture, and ethnic origin. The amounts of these foods can then be varied, adding supplements if necessary to achieve dietary goals. Exchange lists have long been used as a major tool in implementation of diet therapy, but in our opinion patient compliance with diets prescribed from exchange lists is extremely low and their usefulness limited. Occasionally, compulsive patients who request such detailed prescriptions and extremely labile, juvenile-onset diabetic patients may be appropriate candidates for instruction in the use of exchange lists. The American Diabetes Association recently published exchange lists which better reflect the current principles of diet therapy.[33] Periodic re-instruction in diet therapy is desirable in order to reinforce important concepts and to answer specific questions.[34]

Table 2. Patient Study

History
Previous Illness.
Polyuria, polyphagia, polydipsia, nocturia, fatigue, pruritus, symptoms of reactive hypoglycemia.
Weight: usual, maximum, recent, present.
Precipitating events: infection, trauma, drugs, emotional stress, inactivity, myocardial infarction.
Systems Review.
Concurrent drugs: diuretics, steroids, phenytoin, adrenergic agents, oral contraceptives.
Concurrent evidence of pancreatic disease or endocrinopathy: pituitary, adrenal, thyroid.
Skin: Bacterial or monilial infections, diabetic dermopathy.
Vision: Blurring, decrease in visual acuity, cataracts, glaucoma.
Cardiovascular: angina, myocardial infarction, hypertension, peripheral vascular disease.
Genito-urinary: abortions, birth weight of children, vaginitis, balanitis, impotence, retrograde ejaculation, dysuria, infections, proteinuria, azotemia.
Neurological: paresthesias, dysesthesias, orthostatic, hypotension, diarrhea, sphincter disturbances.
Social/family history: family history of diabetes, obesity, educational level, work habits (hours of work, operating machinery, insurance status), eating, drinking, smoking histories.
Physical Exam
Height and weight.
Blood pressure.
Funduscopic examination and visual acuity testing.
Cardiovascular system (cardiac exam, pulses, skin temperature, atrophic changes of skin, dependent rubor, venous filling time).
Skin (superficial fungal infections, ulcers, necrobiosis lipoidica diabeticorum, other lesions).
Neuromuscular system (mental status, cranial nerve palsies, sensori-motor exam, reflexes, Dupuytren's contracture, interosseous atrophy).
Genito-urinary tract (vaginitis, balanitis).
Foot examination.

Oral Hypoglycemic Agents. Oral hypoglycemic agents were introduced in this country in 1954; in 1961 a continuing multicenter clinical trial (the University Group Diabetes Program, or UGDP) was begun in order to compare tolbutamide with insulin in long-term management of mild maturity-onset diabetes. In 1970, these investigators reported that no drug (insulin, tolbutamide or phenformin) significantly prolonged life or prevented the development of diabetic complications; in fact, use of tolbutamide or phenformin seemed to carry a risk of sudden death due to cardiovascular catastrophe.[35,36] Ever since that report, the role of oral hypoglycemic agents in the management of diabetes has been locked in furious scientific controversy, with far-reaching medicolegal implications.[37-45] The Food and Drug Administration is seeking, with the help of pro-UGDP scien-

Table 3. Basic Regimen of Daily Insulin Therapy

1. For initiation of maintenance therapy, or continuation of satisfactory twenty-four-hour regulation	One † injection of Lente or NPH
2. For intensified therapy in late forenoon and throughout afternoon	One † injection of Semilente + Lente‡
3. For intensified therapy in late forenoon and early forenoon	One † injection of Regular + Lente, or Regular + NPH‡
4. For intensified therapy during night and early forenoon	One † injection of Ultralente + Lente‡ or two injections of "split dosage", Lente or NPH or Globin§
5. For intensified therapy during various segments of day or night	Two injections with appropriate rapidly absorbed insulin as outlined above
6. For evaluation of diurnal insulin needs in difficult-to-manage (highly unstable) diabetes, or intercurrent illness (even in moderately unstable diabetes), or pre-operative or postoperative management (even in moderately unstable diabetes)	Three or four †† injections of Regular before each meal (q8h or q6h). A convenient regimen is Regular before daytime meals q5h and Semilente before generous h.s. feeding

*+ Insulins may be injected from the same syringe ("mixed").
† Injected before breakfast.
‡ Increased insulin binding by antibodies, delayed absorption, or prolonged persistence in circulation indicates need for increased proportion of rapidly absorbed insulins for adequate daytime effect.
§ Usually second injection (before supper or at bedtime) to contain 1/10 to 1/3 of total daily dosage.
†† This may be the basis for transition to one of the more convenient regimens above or maintenance therapy.

Molnar GD: Diabetes Mellitus: Diagnosis and Treatment, New York, American Diabetes Association, Inc., 1971, pp 139–145

tists, to require a warning label on the package insert of all sulfonylurea drugs; the anti-UGDP scientists have long sought an injunction against such labeling, and, failing that, now call for labeling which presents the opposing argument in equal balance. In 1977, the drug phenformin was declared to be an imminent hazard to health, and the FDA ordered it off the market.

Critics of the UGDP study have emphasized defects of patient selection, randomization, clinical evaluation, and statistical manipulation, and the complexity and inaccessibility of the data-processing procedure. While a detailed marshalling of these criticisms[37–39,42–46] and their rebuttals[40,41,47] is beyond the scope of this monograph, the interested reader may wish to study them. A select committee of the Biometrics Society has made an extensive analysis of the UGDP study and finds many faults, but states that its conclusions must stand until there are equally convincing studies to refute them.[48]

A prospective study by Keen and Jarrett, involving 248 newly-discovered diabetics, showed no real difference between tolbutamide and placebo as regards cardiovascular disease or long-term mortality,[49] but the Biometrics Society report also criticizes this study as being inadequately randomized, not truly double-blind, and still uncompleted at the time of review.[48] An unpublished report presented an apparent protective effect of tolbutamide in a similar study,[50] but it was handicapped by small numbers and inconclusive end points.

We recommend: 1) newly-diagnosed patients with stable, maturity-onset diabetes should be treated primarily with diet alone. If ensuing control is not satisfactory to physician and patient, the preferred drug is insulin. 2) Patients already under treatment with oral hypoglycemic agents but not under satisfactory control should discontinue their oral medication. Subsequent decisions should be made as in 1). 3) Patients with normal body weight who are well-controlled (normal fasting and postprandial blood glucose) on oral therapy may be continued on such, but should receive a thorough explanation of the potential risks of therapy. If control remains good, no further treatment is indicated; if control deteriorates appreciably, the oral hypoglycemic agent should be discontinued and insulin therapy instituted. 4) Obese patients receiving oral hypoglycemic agents should discontinue these drugs.

Insulin. An estimated 25-30% of all persons with diabetes (1-2.8 million in the United States) require insulin treatment; it is mandatory for 1) juvenile diabetes; 2) ketocacidosis, present or past; and 3) severely symptomatic diabetes not responsive to other therapy. **We do not recommend** insulin for the asymptomatic or mildly symptomatic patient with hyperglycemia not included in any of the above categories. We particularly **recommend against** its use for obese diabetics who usually gain more weight if so treated.

The central controversy in clinical diabetes is: Does prolonged hyperglycemia accelerate the development of diabetic complications? Convincing animal studies implicate insulin deficiency as crucial in the pathogenesis of basement membrane thickening,[51] but so far the clinical correlations are only preliminary. Any patient receiving insulin offers an opportunity to attempt "excellent control" of the diabetes, and it has been diabetologists' dogma for years that such control would minimize the hazards of microvascular complications. Previous clinical studies were thoroughly reviewed by Knowles who felt that the evidence is not clear-cut in either direction.[52] Furthermore, there is no way of mimicking the range of blood glucose values of the non-diabetic person in even the best-controlled diabetic patient and no practical way of comprehensive documentation of an individual's diabetic control year after year. Hence the

dogma, though attractive, is not and cannot be validated until we achieve the capability to keep moment-to-moment excursions of blood glucose within the range of normal. Needless to say, it should be the physician's goal to obtain the best possible degree of diabetic control within the limits of practicality, but without deceiving himself or the patient that this guarantees freedom from complications.[53,54]

In clinical diabetes, hyperglycemia often remains constant for long periods, then escalates in association with shock, infection, dehydration, GI upset, or psychic stress. At a variable level of hyperglycemia, yeast infections and blurred vision become troublesome, and polyuria and polydipsia a nuisance. More serious is the continued negative balance for calories, some elctrolytes and even vitamins, with the long-term effects of weight loss, weakness, and inability to lead a normal life. The ultimate threat for such patients is that intercurrent infections, trauma, or other known events may precipitate hyperosmolar coma, lactic acidosis, or ketoacidosis.

Instead of insulin, a program of exercise and caloric reduction is better treatment for most maturity-onset diabetic patients, many of whom are obese. If hyperglycemia persists despite these measures, some authorities recommend insulin as a measure of protection against the ultimate threats of coma;[55] others feel that for these patients the risk is slight and the value of insulin unproven.[56] In the past such patients would have been candidates for oral hypoglycemic agents, but we do not recommend them for obese diabetics. Thus, we are faced with three choices, none of them entirely satisfactory to both physician and patient.

We recommend insulin as the *sine qua non* of treatment for diabetic ketoacidosis and for its prevention in the juvenile diabetic and others prone to ketoacidosis (including patients who cannot attain normal weight on any diet). For normal-weight, nonketotic patients, insulin may be used to relieve hyperglycemic symptoms. Against these benefits we must assess the risks of hypoglycemia, insulin allergy, and insulin resistance, and the financial burden of lifelong treatment.

Insulin treatment requires a thorough education of the patient and of his family as to 1) goals and rationale of therapy; 2) aseptic technique; 3) accurate measurement of insulin; 4) proper injection technique and sites; and 5) symptoms, signs, prevention, and treatment of hypoglycemia. Knowledge of these points must be tested and found to be adequate.

The three most popular ways of using maintenance insulin are 1) short-acting (regular or crystalline) only;[57] 2) long-acting (NPH or Lente) only; and 3) some combination of the two, including multiple dosage.[55,58] as shown in Table 3.

The goal of insulin therapy is to bring the blood glucose levels as close to the non-diabetic range as possible without incurring symptomatic hypoglycemia. If one chooses to use the stringent criteria of the Joslin Clinic, then for "excellent control" no blood glucose may exceed 150 mg%, for "good control" no blood glucose may exceed 170 mg%, and for "fair control" every blood glucose must be less than 200 mg%; everything else is considered "poor control", but insulin hypoglycemia is not considered. Stable diabetic patients with low insulin requirements may achieve "excellent control" quite readily with a single injection of NPH insulin before breakfast, whereas others exhibit wide swings in blood glucose despite the most meticulous development of a complex insulin regimen.

A simple way of adusting insulin therapy is to start every patient on NPH or Lente insulin in a dose ranging from 15-30 units before breakfast; if this is inadequate, the dose is progressively increased 2-5 units every few days until glycosuria is minimal (or clinical hypoglycemia supervenes) at some characteristic time each day. Blood glucose should then be checked several times during a typical day, especially at times when glycosuria is absent. If all blood glucose levels are acceptable, then control has been established at that dosage of insulin. If not, further adjustments may be made as indicated in Table 4.

Table 4. Adjustments of Insulin Therapy

Therapy	Time Given	Result	Proposed Adjustment
1. Lente or NPH	ACB	Aglycosuria/shock late P.M.; glycosuria ACL, HS	Mixture of regular and long-acting (2:1) ACB
2. Lente or NPH	ACB	Shock during night; glycosuria ACL, ACS, HS	Mixture of regular and long-acting (3:1), or Semilente ACB
3. Lente or NPH	ACB	Glycosuria ACB; otherwise good control	Mixture of Lente and Ultralente (or Ultralente alone) ACB
4. Mixture of regular and long-acting	ACB	Glycosuria NS, ACB; otherwise good control	Two injections; mixture ACB, and small dose Semilente or long-acting ACS
5. Any of the above	ACB	Variable and imperfect control with unpredictable shock and/or glycosuria	Three or four injections of regular each day, as noted in Table 3.

Quite often, the blood glucose is found to be low in late afternoon but unacceptably high before lunch. Such patients may do better on a mixture of regular and long-acting insulin, in a ratio of 1, 2, or 3 units of regular insulin to 1 unit of long-acting insulin. Again, measurement of blood glucose several times in a day will clarify the degree of control.

Some patients will achieve excellent control throughout the day, only to show marked glycosuria and ketonuria the next morning. The clinician should then suspect the "Somogyi effect", defined as concealed hypoglycemia (usually during sleep) which triggers glucagon, growth hormone, and other hormonal responses to the point of hyperglycemia, glycosuria, and ketonuria 4-6 hours later.[59] Nocturnal symptoms such as nightmares, night sweats, sleep-walking or talking, morning headache, etc., strengthen this suspicion, which may be confirmed by demonstration of low blood glucose values at the appropriate time. For such patients it is usually necessary to reduce further the amount of long-acting insulin in the mixture, and sometimes to add a second injection at supper-time or bed-time. The "brittle diabetic" phenomenon is more often related to recurrent Somogyi effect than to the inherent nature of the disease.

Further elaborations of this general approach may be constructed for individual patients with erratic diabetes. One school of thought suggests that regular insulin, four times a day before meals, is the best regimen for these cases.[57] However, this is impractical for most typical diabetic patients and increases the chances for hypoglycemia.

We recommend continuous therapy with insulin for juvenile patients, for patients with demonstrated ketoacidosis, and for underweight patients unable to achieve normal weight on diet alone. Others may require short-term therapy during periods of stress, surgery, or infection. Long-term therapy may be required by persistently symptomatic patients; if nonobese, control should be pushed to the limit of normalization of fasting and post-prandial blood glucose values, short of hypoglycemia; if obese, insulin should be given only to the point of relief of diabetic symptoms. Opinions to the contrary notwithstanding, **we do not recommend** insulin for the asymptomatic diabetic patient of normal or excessive weight.

Hypoglycemia as a complication of insulin therapy may pose a greater risk than hyperglycemia.[49] When correction of all other factors leaves the physician with the need to choose between "good" control involving frequent insulin reactions versus "less good" control without frequent reactions, **we recommend** the latter.

Exercise. The isolated muscle attains a greater glucose uptake when contracting than at rest, and it has long been known that vigorous muscular exertion lowers blood glucose in the diabetic patient, sometimes accentuating the effects of exogenous insulin to the point of hypoglycemia. On the other hand, bed rest can impair glucose tolerance.[60] The biochemical basis for these phenomena has never been satisfactorily explained.

Regular exercise also enchances the activity of endogenous insulin; following physical training, plasma insulin levels are lower and carbohydrate tolerance improves.[61] Bjorntorp's experiments demonstrated that exercise training reverses peripheral resistance to insulin in obese patients.[62–64] Although exercise training of previously inactive men improves cardiopulmonary conditioning and imparts a sense of well-being, it has little short-term effect on their smoking habits, serum cholesterol, blood pressure, or weight. Similarly, such training increases the exercise capacity of patients with coronary artery disease but does not demonstrably foster the development of coronary collaterals.[65]

Nor is there good evidence that exercise will effectively preserve cardiovascular fitness, specifically "that exercise will in fact, decrease either the rate of development of atherosclerosis or prevent its complications".[66] Studies like that of Morris have shown that a higher incidence of coronary artery disease occurs in the more sedentary occupations.[67,68] but a cause-and-effect relationship has never been proven; lighter work may have been chosen because of a known cardiac condition. The studies were retrospective and other risk factors were not considered.[69] Fox has catalogued at least 13 later studies, most of which reported similar findings but are open to the same criticisms.[70] **We recommend** moderate exercise to assist in maintenance of normal weight.

Foot Care. Problems with the feet are a major and often preventable cause of serious disability in the diabetic patient.[71]

Both peripheral neuropathy and peripheral vascular disease predispose to the development of a break in the skin, which may lead to ulceration of the distal lower extremity. Neuropathy causes loss of sensation, an important defense mechanism against traumatic and/or thermal injury; ischemic peripheral vascular disease may cause ulceration directly but more commonly interferes with healing. Whatever the cause, ulceration initiates a vicious cycle of infection, increased tissue demands for blood supply, inadequate blood flow, and further tissue damage. Unless this cycle is interrupted, gangrene occurs, often necesitating amputation.

The best treatment for the diabetic foot is to pre-

vent injury and infection by preserving the skin's integrity and vitality. All diabetic patients, regardless of age, must be counseled regarding the care of nails, calluses, corns, and skin of the feet. Unfortunately, this simple yet effective form of therapy is often ignored in the physician's routine practice.

There is controversy regarding the role of podiatrists, who are trained exclusively in foot care and have more time for examination and counseling than a busy physician. The view that podiatrists are inadequately trained and should not replace physicians in the delivery of foot care has been discussed in detail by Podell.[72]

We recommend that physicians who treat diabetes examine the feet at every visit and counsel diabetic patients regarding foot hygiene and prevention of injury (Table 5). Because of the importance of simple prophylactic foot care and the steadily improving standards of training and practice in podiatry, all patients should be referred to podiatrists, if available, for initial evaluation and counseling and for all but the simplest foot problems. **We recommend** surgical consultations for extensive ulceration, intermittent claudication, signs of severe ischemia, or consideration for arterial bypass.

Education. Since so much of the diabetic patient's care is self-administered, it is essential that he be led to a thorough understanding of the pathophysiology, clinical manifestations, and management of his disease. Etzwiler has emphasized the responsibility of the physician to provide basic education in several areas as early as possible.[73] We recommend an education plan as well as a therapeutic plan for all patients, with followup to see that they have mastered its essential features. See page 213 for specifics.

The Extremes of Diabetes

Hypoglycemia. Insulin-treated diabetics may develop hypoglycemia as a result of too much insulin, too little food, strenuous physical exertion or any combination of the above. The clinical manifestations may progress from emotional lability and irritability, sweating and "nervous jitters" to tachycardia, dysarthria, ataxia, hypothermia, diplopia, confusion, aphasia, stupor, and unresponsive coma over a period of minutes, reflecting progressive glucose starvation of the central nervous system and reflex sympathetic discharge of catecholamines.

Rarely, hypoglycemia may result from treatment with oral hypoglycemic agents; its development is insidious and usually the patient is found to be unresponsive. Hospitalization and prompt treatment with intravenous glucose are essential; therapy must often be continued for several days in order to prevent late relapse into hypoglycemia.[74]

The hazards of hypoglycemia are its profoundly upsetting effect on patient and family; the risk of injury to self and others if attacks result in falls, motor accidents, etc.; the risk of permanent brain damage from recurrent glucose starvation; and the inevitable disruption of diabetic control, occasionally triggering ketoacidosis.[59]

We recommend that every patient taking insulin and his family be instructed in the prevention, symptomatology, dangers and treatment of hypoglycemia, and that the patient always carry a form of identification to indicate his diabetic status, as well as hard candy or other stable form of disaccharide for emergency use. Patients should take extra carbohydrates at the slightest symptoms of hypoglycemia and when-

Table 5. Principles of Diabetic Foot Care

Do's	Don'ts
1. Wash feet daily with lukewarm water and soap. Pat feet dry, especially between toes.	1. Never wash feet in hot or cold water.
2. Apply powder to feet to absorb sweat during the day.	
3. Apply lanolin lotion to dry areas on your feet.	
4. Check feet daily for cuts, blisters, reddened areas, corns, blue or purple color changes. Consult a doctor about wounds that do not heal and how to treat corns and calluses.	4. Do not cut calluses or corns yourself. Do not use "over-the-counter" medicines on these areas.
5. Use nail clippers to cut toenails straight across and even with the end of the toe. Smooth sharp edges with an emery board. Cutting is easier after soaking feet 15 min. in lukewarm water. If your eyesight is poor or if it is difficult for you to cut your nails, have someone else cut them for you.	5. Do not cut down into the toe sides of the toenail.
6. Wear clean socks or hose every day. Socks or hose should be long enough so as not to pinch toes but should not bunch up in the shoes.	6. Never wear socks or hose that have holes or have been mended. They may cause blisters. Never wear anything tight (garters, girdles) that would decrease blood flow to the feet. Do not sit with legs crossed.
7. If feet are cold, wear warm socks.	7. Never use a heating pad or hot water bottle on the feet.
8. ALWAYS wear shoes that protect the toes and have thick soles.	8. NEVER go barefoot.
9. Wear good-fitting shoes that do not rub. A bad fit invites blisters and corns.	
10. Always break in new shoes slowly. Wear 2-3 hours daily, then switch to older shoes.	

Table 6. Coma in the Diabetic

Type	Precipitating Factor	Basic Disturbance	Mortality
Ketoacidosis	Total insulin lack in face of acute stress	Hyperglycemia, dehydration, increased fat breakdown, ketone body formation, acidosis	3–10%
Hyperosmolar coma	Dehydration with decreased renal function	Hyperosmolarity due to high blood glucose, ketosis	50–60%
Lactic acidosis	Tissue hypoxemia (usually circulatory)	Increased lactic acid, with acidosis but not ketosis	10–20%
Hypoglycemic coma	Insulin excess	Hypoglycemia, poor CNS function	1%

ever unusual physial exertion is begun. An incapacitated patient needs immediate help in the form of a sweetened drink, candy or honey, jam or jelly. If the patient cannot swallow he may still absorb some glucose through the buccal mucosa. Intravenous glucose or parenteral glucagon must be used without delay if simpler measures do not suffice; the family needs instruction in their use if hypoglycemia occurs frequently and suddenly.

Diabetic Acidosis and Coma. These hyperacute diabetic states pose grave threats to patients and serious therapeutic challenges to physicians. The most common forms are indicated in Table 6.

In diabetic ketoacidosis, significant insulin deficiency and relative glucagon excess produce derangements in carbohydrate, protein and fat metabolism, including 1) hyperglycemia leading to osmotic diuresis, dehydration, and hypovolemia; and 2) metabolic acidosis from accelerated ketogenesis. Hyperosmolarity secondary to hyperglycemia occurs to some extent in ketoacidosis, but is much more severe in hyperosmolar non-ketotic coma, which is more common in older patients. Acute metabolic acidosis is characterized by a large serum "anion gap", calculated as the sum of $(Na+ + K+) -$ the sum of $(Cl^- + CHO_3^-)$: the normal range 10-20 mEq/l, which is an approximation of unmeasured anions. In ketoacidosis, the anion gap is widened by increased amount of diacetic acid and β- hydroxybutyric acid; acute metabolic acidosis with a large anion gap also occurs in uremia, salicylate or methanol poisoning, and lactic acidosis. The latter may accompany ketoacidosis, hyperosmolar states, or hypoglycemia as a result of excess lactate production and underutilization, due to such factors as phenformin administration, hypoxemia with hypoperfusion (e.g. myocardial infarction, septicemia, and peripheral ischemia), impaired renal function, and liver disease.

Therapy of coma in the diabetic patient requires replacement of deficiencies (insulin, fluids, electrolytes) and identification and correction of precipitating factors (infection, dietary indiscretion, emotional trauma, myocardial infarction, etc.) Despite a great variety in treatment protocols, all authorities agree on the paramount importance of frequent clinical and biochemical monitoring of the patient, with individualization of therapy rather than rigid adherence to a predetermined regimen. Both inhospital and outpatient education are essential to the prevention of repeated ketoacidosis.

Diagnosis of diabetic ketosis can be made quickly by Detrostix® test and urine and serum ketone tests. (Lacking such maneuvers and faced with an unconscious patient, it is prudent to give intravenous dextrose to rule out hypoglycemia). The diagnosis of ketoacidosis demands prompt insulin therapy. Moderate ketosis and hyperglycemia are easy to manage on an outpatient basis, but the presence of depressed mental state, protracted nausea and vomiting, or Kussmaul respiration mandates hospitalization. General measures such as antibiotics, Foley catheter, or nasogastric suction should be used with discrimination when indicated; a flow sheet is essential.

Either regional or general hypovolemia is a consistent feature of coma in diabetes, and rehydration is crucial for recovery. Fluid deficits (water greater than solute) average 3-10 liters, requiring replacement with normal saline initially and half-normal later. Osmotic diuresis, acidosis, and frequent vomiting in ketoacidosis produce total body wastage of sodium, potassium, and chloride; replacement of these ions is an essential part of standard therapy.

Because ketoacids are metabolizable with insulin and fluids, therapy with bicarbonate should be reserved for severe acidosis (pH less than 7.10, Kussmaul respiration, etc.) or when lactic acidosis is suspected. Alkalotic over-shoot (resulting from too rapid correction of acidosis with bicarbonate) not only potentiates hypokalemia but may also contribute to cerebral hypoxia by mechanisms involving depressed delivery of oxygen via 2,3- diphosphoglycerate (DPG).[75,76]

Although repeatedly recommended, phosphate replacement had not been widely employed until the recent renewal of interest stemming from a better quantitation of phosphate losses,[77] and recognition of the vital role of phosphate in energy substrate metabolism[78] and several newly-characterized low phos-

phate syndromes.[79] Deficits in the range of 70- 100 mM occur, and should be replaced by 50-70 mM of potassium phosphate over 12-24 hours.

Although the way in which treatment is delivered and monitored is more important than any specific program, the potential risks of insulin over-treatment (hypoglycemia, cerebral edema, and hypokalemia) versus under-treatment have prompted the search for a uniform, safe, and effective plan of insulin therapy.[80] The usual practice involves repeated intravenous or subcutaneous injection of regular insulin in 25-200 U dosage. Current reports[81] suggest that administration via intravenous infusion offers several advantages over intermittent bolus treatment, such as 1) a guarantee of insulin delivery at predictable, quantifiable rates; 2) maintenance of sustained levels of circulating insulin with continuous hormonal effect; 3) the ability to vary or terminate insulin treatment quickly; and 4) practicality for use by paramedical personnel. Objections to intravenous infusion include erratic insulin delivery, due to absorption of 20-40% to the glass or plastic tubing; this can be circumvented by the addition of small amounts of albumin.[82] Another argument concerns the availability of necessary equipment. Although a Harvard pump affords best control of delivery, a monitored predictive microdrip set (IVax) works almost as well.

The optimal dosage is also a question; early studies employed large doses, and recent studies recommend an intravenous bolus of 50-100 units per hour,[84.86] based on the rationale that larger doses are needed to overcome insulin resistance factors. However, a study in 1958 found little difference in time for recovery from ketoacidosis among patients receiving total insulin doses varying from 120 to 800 units.[77] Most recent studies, using low doses of 2-12 units/hour, have demonstrated therapeutic effects equivalent to those of larger doses,[87.89] with reduced risk of hypoglycemia and hypokalemia. The low dose of 2- 12 units/hour provides serum insulin concentrations of 20-200 uU/ml, a "physiologic" range from basal (10-20 uU/ml) to maximal postprandial (100-200 uU/ml).

Despite the widespread acceptance of low-dose insulin therapy, **we recommend** caution. There are definite advantages to intravenous therapy and certain points of preference of continuous infusion over intermittent bolus therapy, but the dosage of insulin required remains controversial. While awaiting further studies, **we recommend** estimation of initial dosage based on the severity of the clinical picture, with "fine-tuning" based on subsequent biochemical monitoring. Certainly, doses smaller than 5 units/hour cannot be advised until more experience is gained.

The real key to therapy resides in identification and removal of the precipitating causes(s), and prophylactic education of the diabetic patient to prevent recurrent episodes.

Complications

Diabetic Retinopathy. Diabetic retinopathy is a leading cause of blindness in the United States, and all physicians caring for diabetic patients should be alert to its possibilities. Background retinopathy, including hemorrhages, exudates, or microaneurysms on funduscopic examination, impair vision only rarely and usually require no treatment.[90] Proliferative retinopathy, including vitreous hemorrhage, neovascularization, and retinal detachment,[91] indicates advanced disease which will usually lead to blindness.[92.95]

The treatment methods currently available for diabetic retinopathy include photocoagulation, hypophysectomy, and vitrectomy, all of which are beyond the scope of physicians delivering primary care.[96]

Xenon arc or argon laser photocoagulation often dramatically halts progression of diabetic retinopathy. In the past, it has been difficult to evaluate the efficacy of this technique because 1) treatment is not usually curative; 2) only 3% of patients less than 60 years of age with diabetic retinopathy and no visual impairment become blind within five years;[97] since these are the patients usually selected for treatment, the proportion who would uniquivocally achieve preservation of vision is small; 3) diabetic retinopathy may stabilize or remit spontaneously, although this is rare.

However, there is now clear evidence from a preliminary report of the Diabetic Retinopathy Study[98] that extensive "scatter" photocoagulation and focal treatment of new vessels delays and helps to prevent loss of visual acuity and visual field from proliferative retinopathy. Over 1700 patients with diabetic retinopathy received photocoagulation to one eye chosen randomly; the other eye served as an untreated control. The occurrence of visual acuity less than 5/200 for two consecutively completed, 4- month, followup visits declined from 16.3% in all untreated eyes to 6.4% in all treated eyes over a 2-year followup period. In eyes with moderate to severe neovascularization within one disc diameter of the optic disc margin, the rate of visual loss was high in the untreated eyes and significantly decreased in the treated eyes. Results of treatment also were significantly better than control in eyes with mild new vessel formation within one disc diameter from the optic disc plus fresh hemorrhage, and moderate to severe neovascularization

elsewhere plus fresh hemorrhage. No significant differences between xenon arc or argon laser therapy have been identified. Remaining questions concerning this form of treatment include optimum time of treatment, the effect of treatment upon development and progression of pathologic changes of proliferative retinopathy, and the long-term results of treatment.

In the hands of a trained opthalmologist, photocoagulation rarely produces adverse effects, so the contraindications include the cost in time and money and the slight loss of visual retina. .

Vitrectomy following recurrent vitreous hemorrhages may restore visual acuity and prevent retinal scarring and detachment. The bloody vitreous is removed through a small incision just behind the cornea and replaced with clear fluid. The usefulness of vitrectomy is limited to pre-retinal lesions, and long-term followup studies will be required to assess its effectiveness.

Hypophysectomy may halt progression of retinopathy, but poses at least three associated problems: 1) it is not always successful; 2) the benefit may be temporary, and patients may relapse with progression to blindness; and 3) permanent panhypopituitarism is an unavoidable and undesirable side effect, with its special problem of increased sensitivity to insulin and insulin shock. Hypophysectomy should be reserved for advanced, widespread retinopathy, as a last-ditch attempt to preserve vision.

Initial evaluation of diabetic patients should include a thorough funduscopic examination, preferably with dilatation of the pupils, and visual acuity testing, steps which should be repeated at least once and preferably two or three times per year. The consequences of blindness are so serious that **we recommend** an aggressive approach to the problem of diabetic retinopathy: 1) decrease in visual acuity, rapid progression of background retinopathy, or the appearance of proliferative changes are all indications for ophthalmological referral, preferably to a center which is equipped to perform the procedures mentioned above; 2) "scatter" photocoagulation and focal treatment of new vessels should be instituted if there are a) moderate or severe new vessels on or within one disc diameter of the optic disc, b) mild new vessels within one disc diameter of the optic disc if fresh hemorrhage is present, or c) moderate to severe new vessels elsewhere if fresh hemorrhage is present; 3) vitrectomy may be performed if recurrent vitreous hemorrhages are present over a 6- to 12-month period; and 4) hypophysectomy should be performed only when severe and progressive retinopathy fails to respond to the above forms of treatment.

Diabetic Nephropathy. Although diabetic renal disease accounts for only about 6% of deaths in the total diabetic population, it is the major cause of death (50%) in juvenile-onset diabetes.[99]

The most specific renal lesion in diabetes is diabetic glomerulosclerosis, with thickening of the mesangium and nodule formation; the clinical result is nephrosis with proteinuria, followed by renal failure. Although renal atherosclerosis, medullary necrosis, and chronic phelonephritis may be associated with diabetic nephropathy, we exclude them from a strict definition because they are not clearly increased in or confined to the diabetic as opposed to the non-diabetic population.[100,102]

The well-documented natural history of diabetic nephropathy in juvenile patients usually begins with proteinuria about 10 years after the onset of diabetes. The prevalence of hypertension parallels that of proteinuria and increases steadily to age 40. Proteinuria precedes the development of azotemia by 1-12 years[104] but after that the time to death is quite short. Visual acuity deteriorates markedly as renal failure accelerates and the serum creatinine concentration approaches 12–15 mg/dl. There is little data on the natural history of diabetic nephropathy in adult-onset diabetics, but what we have suggests that morbidity and mortality in the young are related to microangiopathy (diabetic glomerulosclerosis) and in the older age groups to macroangiopathy (atherosclerosis).

No form of treatment has been shown to alter the natural course of diabetic renal failure. Treatment methods currently available for end-stage diabetic nephropathy include chronic hemodialysis, maintenance peritoneal dialysis, and renal transplantation, but there are so far no controlled prospective studies to delineate which of these is best, only uncontrolled prospective evaluations of individual treatments.

Chronic hemodialysis has been employed extensively in end-stage diabetic nephropathy with disappointing results: a high death rate and morbidity due to myocardial infarctions, cerebrovascular accidents, infection, and clotting of the shunt.[105.107] Neuropathy is not exacerbated, but retinopathy progresses to visual loss in most patients; peripheral ischemia and gangrene often follow the insertion of A-V fistulas for vascular access.[108] In chronic center hemodialysis, patients are hospitalized frequently and their opportunity for rehabilitation is poor. Chronic home hemodialysis has the advantage of decreasing hospitalization time and providing an opportunity for rehabilitation; it requires an intelligent, motivated patient and family, and the advantages of this therapy over center dialysis is associated with these factors.

Maintenance peritoneal dialysis has been useful occasionally in patients who lack vascular access for hemodialysis and those with autonomic insufficiency and vascular instability, but it carries high risk of peritonitis and intestinal perforation.[109] Severe hyperglycemia also has occurred with the use of glucose-containing dialysates, but this may be prevented by adding insulin to the dialysate.[110]

Renal transplantation for end-stage diabetic nephropathy has been limited to only a few centers, which report some degree of success.[111,112] Morbidity and mortality are still higher in diabetic than non-diabetic transplant recipients; related-donor kidney transplantation gives the best survival rate and cadaver kidney transplantation the next best. Transplantation when the serum creatinine is 6-8 mg/dl works better than if delayed until higher levels are reached. Bilateral nephrectomy and splenectomy are associated with a high postoperative mortality and should therefore be omitted. In subjects receiving a related-donor transplant, diabetic-uremic muscular weakness and enteropathy have improved, hypertension has been easier to control, retinopathy has stabilized[113] and patients have often experienced dramatic improvement in quality of life.[114] After a 5-year followup, no histological changes have been seen in the transplanted kidneys.

We recommend that patients with serum creatinine of 6-8 mg/dl be referred for renal transplantation. For patients under 40 years of age, we recommend transplantation with a related-donor kidney; the next best choice is transplantation of a cadaver kidney. **not recommend** transplantation in patients over the age of 40, because of the frequent vascular complications. Although chronic hemodialysis does not arrest progression of the complications of diabetes and produces significant complications of its own, we do not feel that diabetes mellitus is a contraindication to this procedure. In selected cases, chronic dialysis can be carried out successfully at home; otherwise, center dialysis is the better alternative. under unusual circumstances, maintenance home peritoneal dialysis also may offer an acceptable option.

Diabetic Neuropathy. Approximately one out of seven diabetic patients present with symptoms related to some form of neuropathy during his lifetime. In others the manifestations may be entirely asymptomatic, discovered only in the course of a routine physical examination. Almost any neurological problem arising in a patient with existing diabetes is usually, and probably correctly, labeled as diabetic neuropathy.

Neuropathic changes with their clinical manifestations usually progress gradually, sometimes waxing and waning unpredictably, sometimes reversible or self-limited. These multitudinous syndromes are poorly understood and documented by neurologists and internists alike;[115] diabetic neuropathy seems to be a condition that somehow falls between these two disciplines, without getting much attention from either. Clinical research is scanty.

The several theories as to the pathogenesis of diabetic neuropathy cannot be considered to be mutually exclusive, since the variegated clinical picture may reflect different etiologies in different patients, or even in the same patient. The simplest and perhaps the most attractive explanation is that of Fagerberg,[116] who states that all neuropathy is the result of microangiopathy in the vasa nervorum of the affected nerves. Although impressive biopsy evidence supports this theory, the association may be more coincidental than pathogenetic.

Another theory postulates defective lipid synthesis in the myelin sheath,[117] and the latest explanation is based on a disturbance in the polyol pathway of carbohydrate metabolism, resulting in sorbitol accumulation in the nerve fibers with osmotic attraction of water, with nerve swelling and compression by the rigid perineural fibrous tissue sheath, thus producing anoxia with further nerve damage.[118,119] Neuropathy may precede other clinical manifestations of diabetes and disappear when therapy is instituted, or it may develop when unstable diabetes is brought under good control, illustrating a relationship which is tenuous at best.

The simplest of the many classifications of diabetic neuropathy correlates the anatomical lesion with the clinical manifestation, namely 1) disease in the nerve roots producing radiculopathy; 2) disease in the mixed spinal or cranial nerves producing a mononeuropathy; 3) disease in the nerve terminals producing polyneuropathy; 4) disease in the sympathetic ganglia producing autonomic neuropathy; and 5) a disease called amyotrophy, where the pathological lesion is not clearly localized.[120] Numerous clinical presentations illustrate each of these forms.

The diagnostic formulation should aim at excluding other etiologies in the differential diagnosis, particularly the potentially treatable ones such as sprue, pernicious anemia, heavy metal poisoning, etc. Examination of spinal fluid and measurement of nerve conduction velocity add little of positive diagnostic import.

Most forms of diabetic neuropathy are progressive or selflimited, and none are promptly affected by any treatment. Unless the patient presents with severe wasting as a result of sudden uncontrolled diabetes, there is little chance of improving the neuropathic disease simply by instituting "good" control. Patients with any symptomatic form of diabetic neuropathy

are often greatly disturbed, depressed, and incapacitated by their illness. Their desperate complaints and demands for relief may persuade the physician to attempt therapeutic efforts which he well knows to be useless. **We recommend** against this approach except under unusual circumstances; instead, the patient should be encouraged, treated for depression, and kept in close contact with the physician by frequent visits and a hopeful, optimistic attitude. While this role may be difficult for the average physician, he should realize that the diabetologist is equally frustrated.

The most common form of diabetic neuropathy is a peripheral, symmetrical polyneuropathy with symptoms of severe burning, tingling paresthesias, and pain in the feet and legs, characteristically worse at night. The patient should be offered whatever analgesia is necessary to produce a modicum of pain relief without expecting complete relief, which is usually impossible short of narcotics. Sometimes transcutaneous nerve stimulation is helpful. Ellenberg has proposed the use of phenytoin (Dilantin), 0.4 mg daily,[121] but has recently admitted that the success rate is often less than 50%. Duncan et al[122] initially reported that clofibrate (Atromid-S) was effective in peripheral polyneuropathy, and this has been confirmed by the controlled, double-blind trial of Berenyi et al,[123] but not by similar unpublished studies at the same institution.[124] Rull et al[125] and Wilton[126] have reported double-blind crossover trials with carbamazepine (Tegretol), in both of which the drug definitely produced symptomatic improvement in doses of 0.6-1.2 gm daily. Unfortunately carbamazepine tends to produce dyspepsia and gastrointestinal bleeding to a troublesome degree, especially in patients with diabetic neuropathy.

Although carbamazepine remains the most dependable drug in the treatment of severe painful diabetic neuropathy, **we recommend** its use only for patients who cannot function on non-narcotic analgesics and who desire a trial of the drug with a full understanding of its potential for severe adverse effects; blood counts, stool guaiac, and gastrointestinal X-ray series should be checked periodically, regardless of symptomatology.

Autonomic neuropathy presents with many distressing complaints: 1) symptomatic orthostatic hypotension, apparently resulting from damage to the baroreceptors, often responding to fludrocortisone (Florinef) 0.5-1.0 mg daily;[127] 2) delayed or impaired peristalsis, particularly involving the stomach and small bowel, sometimes responding to urecholine;[128] 3) diabetic diarrhea, sometimes responding to tetracycline unless malabsorption is present; and 4) neurogenic bladder and/or impotence and retrograde ejaculation[129] for which some authorities recommend anticholinergic or sympathomimetic drugs.[130,131] Physical interruption of the internal sphincter improves most cases of neurogenic bladder,[132] but there is no medical treatment for impotence.[133] Recent surgical approaches for impotence, e.g., insertion of a plastic splint or hydraulic splint into the corpora cavernosa, have enjoyed favorable publicity, but it is too early to evaluate long-term results. **We recommend** consideration of all these modalities in individual cases.

Cardiovascular Disease. In 1965, an epidemiological study from Michigan[134] showed that diabetic patients had a two-fold greater prevalence of vascular disease than non-diabetic persons of similar race and sex; the effect of hyperglycemia was independent of blood pressure and serum cholesterol. Conversely, persons with cardiovascular disease had a high prevalence of hyperglycemia. The Bedford study[135] also identified prospectively a higher incidence of vascular disease in diabetic than non-diabetic patients, but neither study controlled for other known risk factors such as hypertriglyceridemia, obesity, smoking, duration of diabetes, or treatment. The Framingham study[136] also showed accelerated coronary atherosclerosis in diabetic patients and more myocardial infarctions (particularly silent infarction). In addition, the incidence of congestive heart failure was twice as great in diabetic males, and five times greater in diabetic females, than their non-diabetic cohorts, even when age, blood pressure, weight, serum cholesterol, and coronary artery disease were taken into account. Numerous pathological studies have identified microangiopathy associated with diabetes mellitus.[137-139]

We recommend increased efforts to minimize cardiovascular risk factors in patients with diabetes.

Special Management Problems

Children and Adolescents. The diabetic child and his parents should receive proper education in the fundamentals of diabetes and its control at the onset, with the ultimate goal being a youngster who is completely self-sufficient in the management of diabetes by age 14 or 15.[140]

Since insulin is intimately involved in the growth process, careful dosage adjustment is essential. Soon after therapy is begun, insulin requirements often fall, only to increase progressively to meet the needs of growth, as manifested by glycosuria. This is managed by increasing the daily dose of long-acting insulin (Lente or NPH) by an increment of 2 units every 4 days until 1+ glycosuria is reestablished.[141]

A child's life is marked by numerous episodes of

acute illness, often accompanied by vomiting or diarrhea. These fluid losses may precipitate ketoacidosis, necessitating hospitalization. Fever of 101°F or greater or persistent vomiting are signals that the child should be seen by a physician or come to the hospital without delay. **We recommend** rehydration with intravenous 5% dextrose in half-normal saline solution, which provides electrolytes and free water; potassium, approximately 30 mEq/1, should be added only if urine flow is adequate and serum potassium levels are not elevated. Regular insulin is given subcutaneously in amounts of 0.25 to 1.0 units per kg of body weight depending on the plasma CO_2 and glucose levels.

Often an acute illness can be handled at home. If there is nausea and/or vomiting, long-acting insulin should be withheld and regular insulin should be given subcutaneously every 4 to 6 hours during the day. Fluids such as ginger ale or diluted fruit juice are given frequently in small amounts, then a soft diet as tolerated, with re-institution of long-acting insulin.[142]

Insulin dosage must be decreased promptly when increased physical activity produces aglyosuria or symptoms of hypoglycemia; **we recommend** daily reductions of 2 to 4 units until 1+ glycosuria reappears. On the other hand, when increased physical activity can be anticipated, insulin dosage can be reduced; if not, adequate nourishment should be taken after the activity. Diabetes should never be considered a contraindication to a full and strenuous life.

Hypoglycemic episodes should be avoided scrupulously since they are uncomfortable and may be frightening. The child may be embarrassed or physically injured by the episodes, which, if frequent, may lead to permanent brain damage. The diabetic patient should carry hard candy at all times. The parents should be instructed to give 0.5-1 mg of glucagon (depending on age) intramuscularly to the unresponsive child. This is usually enough to restore consciousness so that sweetened juices can be given orally.

Although everyone receiving insulin develops antibodies, this rarely reaches serious proportions. Some teen-agers may go through periods of increased insulin need, up to 100 to 200 units daily for a few months of a year. If this occurs, the dose of long-acting insulin should be split into a pre-breakfast (2/3) and a pre-supper (1/3) dose. Severe insulin resistance (over 200 units/day) is rare and is generally sensitive to steroid treatment.[141]

Ketonuria for whatever reason should be treated promptly to prevent ketonemia and the development of acidosis. **We recommend** that the patient take 20% of the daily dose of long-acting insulin as regular insulin at mealtime if moderate or large amounts of urinary ketones are measured at that time (10% for small amounts). If ketones appear before breakfast, the amount of regular insulin should be mixed with the long-acting insulin in the same syringe.

We recommend an unmeasured diet normal for age and adequate for normal weight gain, including a good source of protein, carbohydrate from starches such as rice and potatoes, mainly unsaturated fats, fresh fruits and vegetables, minerals and vitamins.[145] Refined sugar and saturated animal fats are to be avoided.

For the psychological health of the diabetic child, **we recommend** that the daily demands for compliance should be limited to the absolute essentials of management: one injection (two at most), three urine testings, regular meals, and snacks if necessary.[143] Regular visits to the physician should be continued into adulthood; frequent alterations in insulin dosage are characteristic of childhood diabetes and require explanation and understanding.

The problems that plague diabetic patients in later years are not seen in childhood. Microaneurysms and proteinuria due to diabetic renal disease are rarely seen in patients under 14 years of age. Although long-term prognosis for the various complications has been reported,[144,145] one can never predict which juveniles will have difficulties in later years.

Transient diabetes of the newborn usually occurs in "small-for-dates" infants; it appears in the first two weeks of life and is characterized by hyperglycemia, weight loss, dehydration, and acidosis with minimal ketosis. Insulin may be required for as long as a year. Some authors postulate functional immaturity of the pancreatic beta cells, since they eventually secrete insulin normally.[146]

Children with asymptomatic inappropriate hyperglycemia, occasional glycosuria, and even a mild-to-severe hypoglycemia (usually occurring 2 to 3 hours after a meal) probably secrete excessive insulin in response to glucose stimulation. Treatment consists of weight reduction for the obese, and small frequent feedings high in protein for those with hypoglycemia.

Pregnancy. Prior to the advent of insulin therapy about half of diabetic women were amenorrheic. Pregnancy occurred rarely, and always accelerated the diabetes, resulting in a mortality rate as high as 44%. Now, with insulin, antibiotics, and modern surgery, the maternal mortality of diabetic women approaches that of non-diabetic women.[147,148]

Pregnancy is characterized by significant metabolic changes. One of the most important of these is increasing resistance to insulin as the pregnancy advances, probably an effect of several hormones, including human placental lactogen, a polypeptide with growth hormone-like activity, secreted into the ma-

ternal circulation by syncitiotrophoblasts of the placenta.[149,150] High levels of estrogen and progesterone also exert an adverse effect on carbohydrate metabolism.[151] The normal gravid patient responds by increasing insulin release following glucose load. Resistance to glucose utilization by the mother and high consumption by the fetus result in lowered fasting glucose levels but slower decline of glucose levels after carbohydrate load.[148] Since the fetus can use only glucose for its energy needs, maternal metabolism shifts toward utilizing the products of fat metabolism (thereby sparing essential glucose).[152] "Accelerated starvation" makes the pregnant woman more prone to fasting ketosis.[153,154] Insulin sensitivity returns immediately upon delivery of the placenta.[155] Insulin kinetic studies have shown that the half-life of insulin remains unaltered during pregnancy.[149]

Intensive care of the pregnant diabetic patient and specialized newborn care has decreased perinatal mortality to less than 10%,[147,148] the most frequent causes being intrauterine fetal demise, birth injury of the macrosomic infant, hyaline membrane disease, and congenital anomalies.

Glucose levels in the fetus closely parallel those of the mother. If the mother's glucose tolerance is impaired, she transfers a high level of glucose to her fetus. Insulin does not cross the placenta, so the fetus increases its insulin production to regulate the elevated glucose load. Excessive fetal growth, polyhydramnios, intrauterine demise, and other deleterious effects of diabetes upon the fetus may be a consequence of fetal over-insulinization.[156,157] Periods of hypoglycemia are tolerated well by the fetus as compared to maternal ketoacidosis, which leads to fetal wastage in 50% of cases. In addition, maternal ketonuria is associated with neuropsychological defects in children of diabetic mothers.[158]

Gestational diabetes is defined as abnormal glucose tolerance (US Public Health Service criteria) without fasting hyperglycemia during pregnancy in a previously normal patient. Of these patients, 60% will subsequently become overtly diabetic when stressed or later in life.[159] Considerable controversy remains as to whether perinatal outcome can be improved by treating gestational diabetes. Recently, however, O'Sullivan has shown that pregnant diabetic patients less than 25 years old are at no greater risk, while those 25 years or older have a higher incidence of perinatal mortality.[160-162] **We recommend** a glucose tolerance test at the beginning of the third trimester of pregnancy for 1) pregnant patients age 25 or over and 2) those with a history of a previous poor pregnancy outcome, such as intrauterine fetal demise, macrosomia, or polyhydramnios. Pregnant patients with diabetes should receive dietary instruction, monthly fasting blood sugars, and careful observation for complications such as polyhydramnios or macrosomia. Older patients and those who develop fasting hyperglycemia may require insulin. Estriol should be monitored intermittently after 30 weeks, and patients with low baseline estriol and those in a high-risk group should be followed more closely as outlined for overt diabetes.[163] Uncomplicated pregnancies may be delivered at term. For patients younger than age 25, we do not recommend routine glucose tolerance tests, but proper fasting blood sugar determinations during each trimester.

As previously discussed, overt diabetes is defined as fasting hyperglycemia with appropriate symptoms. Ideally patients with overt diabetes should be hospitalized early in pregnancy for renal function testing, ophthalmological consultation, and "physiologic" regulation of blood glucose. Sources of infection such as carious teeth and occult urinary tract infections should be treated.[147,148] Patients accustomed to loose medical control require careful explanation of the need for meticulous dietary regulation and insulin dosage. During pregnancy, blood sugars must be used to regulate insulin dosage since glucosuria occurs at lower blood glucose levels; nevertheless, urine tests for glucose and acetone should be recorded daily. Diet therapy consists of 70 grams of animal protein and sufficient carbohydrate to meet the energy needs of the fetus (approximately 2200-2400 calories individualized for the energy requirements of the mother). Fasting blood glucose levels should be maintained at less than 100 mg/dl and 2-hour postmeal levels below 150 mg/dl. With optimal control, fetal salvage approaches that for non-diabetic mothers.[164,165] The only factor which has not been affected by close diabetic control is the high incidence of congenital anomalies, which has become the major cause of perinatal mortality.[161]

During the second and third trimesters insulin requirements gradually increase (average 1 unit per week). Smooth regulation generally requires morning and evening insulin dosage, often with a mixture of long-acting and regular insulin. Frequent hospitalizations may be required in "brittle" patients. When diabetic regulation becomes difficult, occult sources of infection should be sought.

We recommend against the use of oral hypoglycemic agents in pregnancy due to increased risk of lactic acidosis, possible teratogenicity, and neonatal hypoglycemia, which is often severe because these drugs are poorly metabolized by the immature liver.[166]

The pregnant patient with overt diabetes should be followed closely (perhaps weekly) to titrate her insulin and to monitor retinopathy, nephropathy, and

vascular compromise.[167] These patients are best managed in a medical center capable of providing a neonatalogist, ophthalmologist, medical consultants, and laboratory support for the specialist in high-risk obstetrics. Patients with advanced vascular complications should be advised of the excessive risk of medical complications during their pregnancy and the possibility of rapid progression of these lesions. Abortion should be recommended in patients with progression of proliferative retinopathy or life-threatening exacerbations of renal or vascular disease.

Recent advances in perinatal medicine have improved fetal salvage. Sonar evaluation of the fetus beginning in the second trimester allows accurate determination of gestational age and evaluation of fetal growth.[168] With the advent of urinary and serum estriol determinations we are able to evaluate the status of the fetus in utero.[169] To predict fetal compromise reliably, estriol levels must be followed daily, however, and the expense is enormous.[170] Recently the oxytocin challenge test (OCT) has been recommended to supplement estriol determinations for intrauterine fetal evaluation. The OCT may become positive well before a fall in estriol is noted.[171] Gabbe and Freeman have shown that no fetal deaths occurred within a week of a negative test among more than 200 pregnant patients.[172] **We recommend** weekly OCT and biweekly estriol determinations after 30-32 weeks (usually outpatient). If the OCT becomes positive, patients should be admitted and followed with daily estriol determinations. If both studies predict imminent demise of a viable fetus, the patient should be delivered immediately. Usually however, these studies reflect adequate fetal reserve and delivery is delayed until fetal lung maturity is determined by a positive lecithin/sphingomyelin (L/S) ratio.[173]

We recommend following pregnant patients without medical complications on an outpatient basis until about 34 weeks (if estriol and OCT levels remain favorable). Patients with insulin-requiring diabetes should then be admitted for the remainder of their pregnancy, and estriol and OCT determinations continued. Glucose metabolism should be carefully controlled and delivery should be accomplished when fetal lung maturity is predicted by a positive L/S ratio, usually at about 36-38 weeks. Delivery may be required considerably earlier in severe diabetics because of the high incidence of renal, retinal, or vascular complications or early fetal compromise.

The method of delivery must be individualized. If fetal condition is good and maturity is documented, labor can be induced, providing the cervix, presentation, and fetal/birth canal size are favorable and continuous fetal heart monitoring is followed. If there is any doubt about fetal well-being, operative delivery is preferred.

Rigid control of blood sugars prior to delivery will prevent complications in the infant of the diabetic mother.[164,174] On the morning of planned delivery regular insulin in 5% dextrose, approximately 10 units per liter, should be given by continuous infusion at 150-200 ml/hr. Glucose-free electrolyte solutions should be given if rapid expansion of the vascular volume is required so as to avoid sudden hyperglycemia in the fetus, with subsequent profound hypoglycemia after delivery. General anesthesia is preferred in hypertensive patients because of the serious problem of sympathetic blockade and sudden hypotension with induction of anesthesia.

Insulin sensitivity (and often hypersensitivity) returns after delivery. Insulin dosage should be reduced to approximately 1/3 to 1/2 the pre-pregnancy dosage; occasionally patients require no insulin for long periods of time. Gestational diabetic patients generally revert to euglycemic states.

Care of Newborn of Diabetic Mother. The offspring of the diabetic mother is at higher risk of 1) spontaneous abortion, 2) late fetal death, 3) neonatal death, 4) congenital anomalies, and 5) other problems, such as macrosomia, renal vein thrombosis, respiratory distress syndrome (related mostly to accompanying prematurity), infection, hyperbilirubinemia, hypocalcemia, and hypoglycemia. **We recommend** that the pediatrician become familiar with the case prior to delivery, so that the proper laboratory studies and treatment program can be instituted without delay. Serum glucose should be checked at 1- to 2-hour intervals with Dextrostix®, and values under 45 mg/dl should be checked by a quantitative glucose oxidase method. A value of 45 mg/dl or lower calls for immediate oral feeding of 5% glucose, followed with formula feeding at 2-3 hour intervals, beginning in every case before 6 hours of life. If serum glucose measured before each feeding remains at 30 mg/dl or lower, **we recommend** a bolus of 50% glucose (0.5 gm/kg body weight) followed by an intravenous infusion of 10 or 20% glucose. The rate should be tapered gradually to determine its continued need. Rarely, intravenous glucose alone fails to correct the hypoglycemia and cortisone acetate is required (5 mg/kg/day given intramuscularly every 8 hours).

Effect of Antepartum and Infant Nutrition in Development of Adult Obesity. Infants born to diabetic women have an abnormal increase in total number of adipocytes.[175] Present evidence suggests that such a hypercellular state predisposes the individual to obesity later in childhood and adult life.[176] White[177] has reported a significant incidence of adolescent-onset obesity among the offspring of diabetic mothers but

not among those of diabetic fathers. The etiologic factors in stimulating increased numbers of adipocytes in the offspring have not been ascertained. The critical question of whether careful control of the diabetic mother leading to less obese infants would also reduce adipocyte cells needs to be determined. It is important to note (in one study) that ten diabetic children had abnormal increases in cell number.[178] Three had a history of mild obesity, one of marked obesity, and the other six had no history of a weight problem. All had either a parent or grandparent with diabetes. Such subjects need to be followed for many years to determine whether increased cell number invariably leads to obesity.

Oral Contraceptives. Use of oral contraceptives decreases glucose tolerance, may revert the glucose tolerance test of a previous "gestational diabetic" back to abnormal,[179] and makes diabetic control more difficult. Some obstetricians feel that intrauterine devices carry a high risk of infection in diabetics and should be used with caution. Use of the condom or diaphragm offers perhaps the best solution for temporary contraception. Sterilization should be suggested to the older diabetic. **We recommend** individualization of therapy based on these considerations.

Surgery. Modern surgical techniques have improved surgical mortality statistics to the point of removing most differences between the diabetic and non-diabetic populations.[180] Nevertheless, further efforts are needed to reduce paraoperative morbidity related to control of glucose metabolism and to shorten hospitalization, which is longer than that for non-diabetic patients.

Glucose metabolism is disturbed not only by mental stress in the form of preoperative anxiety, but also by the stress of anesthesia and of the surgical procedure itself,[181,182] which triggers an increase in factors that oppose insulin action, such as catecholamines, growth hormone, glucocorticoids, and glucagon, thus increasing hyperglycemia.

Patients for elective surgery should be carefully evaluated preoperatively, to permit the uncovering of previously undiagnosed diabetes and to insure stable glucose metabolism in known diabetics; this can be done in the office or in the hospital, depending on the patient and on the proposed surgery. (In one report, 16.8% of diabetic surgical patients had no prior knowledge of their diabetes.[149]) Preoperative cardiovascular and renal evaluations of the diabetic should be obtained; the presence of ketoacidosis or extreme hyperglycemia requires postponement of surgery for several hours depending on the urgency of operation. Any concurrent infections should be identified and treated.

During the operative period and while oral intake is restricted, caloric intake is replaced by 5-10% dextrose solution intravenously in the amount of 2-3L per day. Higher concentrations of dextrose are to be avoided. Appropriate electrolytes are added, but usually no protein or fat supplement is required unless the period of restricted oral intake exceeds 3-5 days.

Glucose metabolism is monitored by checking "second-voided" urine specimens for glucose and ketones as an index of general trends. Blood glucose determinations serve as a guide for acute changes in therapy during the paraoperative period.

Patients with mild diabetes controlled by diet and/or oral hypoglycemic agents may require no insulin for minor procedures. Oral agents should be discontinued on the day prior to surgery and resumed, if indicated, when oral intake status permits (see section on oral hypoglycemic agents). In major procedures, paraoperative stress and subsequent hyperglycemia frequently necessitate insulin therapy for these patients.

Alternative methods of insulin delivery include regular insulin, given subcutaneously according to blood glucose levels at six-hour intervals or added to 5% dextrose solutions for infusion. A dose range of 5-20 units of regular insulin in each liter of 5% dextrose is typical for those patients who will have restricted oral caloric intake for several days. This technique is tailored more appropriately to constant glucose intake than intermittent regimens. In a large series reported by Shuman and Galloway in 1963, patients with mild, non-ketotic diabetes received regular insulin and 5% dextrose solutions by intravenous infusion during the immediate postoperative period. This technique appears effective, safe, and simple to administer[182,183] and has proven efficacious in the treatment of diabetic ketoacidosis.[80,89] It offers several advantages over intermittent subcutaneous or intramuscular regimens, i.e., 1) more immediate insulin action; 2) maintenance of stable, effective, safe, blood insulin levels; 3) the ability to alter or end the insulin effect promptly, due to the short half-life of insulin in the circulation; and 4) avoidance of erratic absorption from tissue depots. Adjustment of dosage is dictated by periodic blood glucose measurements; and although frequent sampling is advised initially, this becomes less necessary once "steady state" conditions are achieved. Blood glucose values in the range of 150-250 mg/dl are acceptable. With resumption of oral caloric intake greater than 800-1000 calories, intermediate-acting insulin (NPH or Lente) may be restarted in appropriate doses while the insulin/glucose infusion is tapered and discontinued.

For insulin-dependent patients going to surgery, most authorities currently recommend split-dose, intermediate-acting insulin, wherein a fraction of the

preoperative dose is given each morning, and regular insulin based on blood sugar measurements may be added later.

Like therapy for other states of acutely altered glucose metabolism, treatment for the diabetic patient undergoing surgery will suffer if there is no uniform, well-monitored system of therapy for unstable postoperative glucose levels. The lack of such a system can lead to confusion, disruption in continuity of care, and morbidity secondary to 1) marked hyperglycemia leading to dehydration, vascular thrombosis, aggravation of infection, ketoacidosis, delay in wound healing and malnutrition; or, conversely, 2) over-insulinization, with hypoglycemia and hypokalemia, complications that are particularly hazardous in elderly patients with cardiovascular disease. "Sliding scale" or "split dose" insulin regimens based on glycosuria exemplify disruption in continuity of therapy; this system is ineffective because 1) frequent, double-voided urines are rarely possible on a busy surgical ward; 2) glycosuria is a limited index of blood glucose in acute, unstable settings; 3) individual and age-related differences in renal threshold for glucose are unpredictable; 4) such retrospective therapy based on past events does not anticipate future insulin needs; and 5) this system transfers responsibility for therapeutic decisions from physicians to less qualified personnel. **We do not recommend** "sliding scale" insulin regimens based on glycosuria, but rather encourage changes in insulin therapy based on blood glucose measurements specifically, obtained ideally twice daily in the initial postoperative period, with further measurements as indicated by the stability of blood glucose control.

We do not recommend the use of a Foley catheter for the sole purpose of obtaining the urine glucose sample. **We recommend** careful search for infection and dietary alterations whenever high insulin requirements persist postoperatively and are unexplainable. Reduction in insulin dosage as postoperative stresses resolve should be anticipated.

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Education in Diabetes

As the authors take care to point out throughout their article, the education of the patient with diabetes, and the family of the patient as well, is of crucial importance to treatment. These are the key areas of education as selected by the authors.

Essential Areas

1. Role of patient and family in treatment.
2. Basic concepts of diabetes and its control.
3. Principles of dietary management.
4. Importance and interpretation of urine tests.
5. Acute complications.
6. Chronic complications.
7. Personal hygiene.
8. Exercise.
9. Importance of continuing care and education.
10. Medical identification.

Desirable Areas

1. Insulin: kinds and usage.
2. Oral hypoglycemia agents.
3. Family planning and heredity aspects.
4. Vocational planning and financial aspects.
5. Camp and school experiences.
6. Research
7. Diabetes associations and their importance.
8. Psychological and social aspects of the disease.
9. Effect of other drugs on control of diabetes.

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failed to reveal any source of tumor. Prior to performance of the laparotomy, it was hoped that a primary site such as an ovary might be identified; such a site might offer a better prognosis with chemotherapy than other types of mucinsecreting carcinomas.

The patient's postoperative course was benign. It was felt that the patient's condition indeed represented the syndrome of "occult carcinoma of the breast." Accordingly, she was started on 5-FU, methotrexate and cyclophosphamide. When the patient was last seen she was doing well and remained asymptomatic 34 months after detection.

Discussion

Metastatic carcinoma in axillary lymph nodes has been noted in patients having primary tumors in the lungs, stomach, colon, pancreas, thyroid gland, liver and skin. Breast carcinoma metastasizes directly to axillary nodes and is the most frequent source of such metastatic lesions.

All of the literature reviewed emphasizes the fact that women who present with the symptom of a lump in the axilla only are usually in good health and otherwise asymptomatic. With such patients, a complete physical examination, including multiple breast examinations performed by several physicians, may fail to reveal any primary site of carcinoma. Moreover, multiple studies, such as radiography, intravenous pyelograms, and bone surveys, may all prove to be negative.[3]

Review of cases of axillary metastasis not involving the breast reveals that all patients studied were symptomatic from their primary tumor. This information suggests that once carcinoma reaches the axillary lymph nodes from an extramammary source, the primary lesion is no longer "occult." One can conclude, therefore, that, if a careful history, physical examination, appropriate x-ray studies, and procedures such as sigmoidoscopy all fail to disclose a primary focus, the ipsilateral breast should be considered the most probable site of origin; deliberation should then be given to removal of the breast.[2]

It is suggested that, when the suspected breast is removed, serial slices should be made every 3-4 mm and any grossly altered areas examined microscopically. Minute lesions may still be overlooked. In one series reported, four of the primary lesions were microscopic in size; most were 1 cm or less, and the largest was 4 cm and was not palpable prior to excision. There is evidence indicating that patients with "occult" carcinoma of the breast have fewer axillary lymph nodes involved than those patients presenting with lymph node metastasis from nonoccult breast carcinoma. In six of 11 patients, only one axillary lymph node contained carcinoma; indeed, it was this node's abnormality which brought each patient to the hospital for study. This factor may in large part account for the more favorable prognosis given to patients with "occult" carcinoma than that given to patients with nonoccult carcinoma.[3]

A number of reports show that patients who have undergone mastectomy for "occult" carcinoma of the breast with axillary node metastasis have survived longer and have had a better prognosis than do patients who are treated for overt carcinoma of the breast with no axillary node metastasis. The paucity of axillary node involvement in "occult" carcinoma of the breast has been noted by several authors.[3] Followup of cases in which a mastectomy was done for the suspected "occult" carcinoma of the breast and in which no lesion was subsequently found microscopically shows that the majority of these patients were living and asymptomatic many years after the surgery; these patients have had no further symptomatic evidence as to the site of the primary carcinoma and, therefore, indications are that the removed breast was the original site.

The clinician encounters a major problem when a patient who has had a mastectomy for carcinoma of the breast later develops an isolated metastatic tumor in the opposite axilla and nothing can be found in the remaining breast to indicate an overt carcinoma in that breast. The axillary tumor may be the first metastasis from the original carcinoma, in which case treatment can only be palliative; or it may be a metastasis from a new "occult" carcinoma in the second breast, in which case a second radical mastectomy may be curative. Six women presenting with this problem were reviewed; and, in four of the six patients, a new primary lesion was found in the opposite breast, accounting for the second metastatic lymph node lesion in the remaining axilla. In each case, the physical examination failed to reveal tumor in the remaining breast. It was only after careful sectioning of the breast that the pathologist was able to discover the new tumor occurring in the breast. Three of these six patients who were operated on and were found to have a second "occult" carcinoma of the breast had lived for eight to 14 years after the second mastectomy. The fourth patient was alive, but she had metastatic disease six years after the second mastectomy.

The incidence of metastatic disease from overt carcinoma of the breast metastasizing to the contralateral axilla appears to be in the range of 4%. The reported incidence of bilateral breast cancer has been

reported to be from 5% to 6.5%. The incidence of "occult" carcinoma of the breast occurring appears to be between 0.3% and 0.5%. From the averages of these figures the predicted frequency of a patient developing bilateral breast cancer with an "occult" primary tumor in either breast in about 2.4%; the frequency for developing "occult" carcinoma in the second breast is about 1.2%. A patient with suspect "occult" carcinoma of the second breast should be given the benefit of a second surgical procedure for removal of that remaining breast if, indeed, there is evidence of metastatic carcinoma occurring in the previously unaffected axillary node area.[4]

Conclusions

1. Axillary node metastasis may originate from any of several organs, but the primary lesion is usually "occult" *only* when it is in the breast.

2. Five-year survival rates in patients who have had a radical mastectomy for "occult" carcinoma of the breast indicate that the survival rate for this condition is better than that for patients with overt breast carcinoma with axillary node involvement.

3. Failure to find the primary focus of the carcinoma in the amputated breast does not exclude the breast as being the probable source of the cancer.

4. Ipsilateral radical mastectomy is indicated for patients with metastatic axillary carcinoma whose primary site is not discernible.[2]

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Active Specific Immunotherapy of Human Solid Tumors

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A limited study of tumor patients with otherwise untreatable lesions suggests the feasibility of using enzyme altered cells in the active specific immunotherapy of human solid tumors.

PREVIOUS WORK, particularly by Simmons et al[1], has demonstrated regression of chemically induced tumors in animals treated by neuraminidase altered autochthonous cells. Additional studies have suggested that such regression is on an immune basis. The most simplified mechanism proposed for these observations has postulated the phenomenon of "antigenic unmasking", wherein the enzyme cleaves excessive N-acetyl neuraminic acid from the tumor cell surface allowing expression of otherwise concealed tumor specific antigen. There have, however, been multiple alternate mechanisms proposed for these findings and the issue is still unresolved.[2,3] There seemed sufficient promise in this modality of treatment to warrant a limited study of tumor patients with otherwise untreatable lesions. It should be emphasized at the outset that such patients were not randomly selected and, in addition, that such patients had undergone multimodality therapy with active specific immunotherapy included as one form. Adverse effects were of as much interest as beneficial effects in these initial studies.

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Methodology

Human tumor tissue was collected under sterile conditions in the operating room and immediately thereafter in the laboratory dissected free of adherent fibrous and fatty tissue and subjected to fine mincing. The minced tumor was passed through a sterile sieve and the cell suspension collected in minimal essential medium. The cell suspension, after counting, was incubated with neuraminidase, 25 units of the enzyme being utilized for each one million cells; the incubation was carried out at 37° C and at a pH of 5.7. After 45 minutes of incubation the cells were washed several times, divided into aliquots, each containing 1 to 5×10^6 enzyme altered cells, and after addition of glycerol frozen at −40° C in liquid nitrogen, the freezing temperature attained in slow gradations. The details of technique are presented by Simmons et al.

The patients thereafter received one injection (1 to 5×10^6 cells) subcutaneously into alternating anterior thighs each month for six months.

Cell viability, as determined by trypan blue exclusion, was not significantly altered by such treatment. The enzyme was effective in the release of N-acetyl neuraminic acid from tumor cells, although the computed release varied from tumor to tumor. Morphologically, there were no great changes in the tumor cells pursuant to exposure to enzyme—the en-

zyme seemed to have no effect on the morphology of red or white blood cells that were found in some of the preparations.

Of greatest importance, none of the preparations appeared oncogenic, and there was no evidence of tumor growth in any of the injection sites employed. As an additional precaution, all tumor vaccines were exposed to 5,000 R irradiation just after thawing and immediately prior to injection.

Results

We have treated thus far 45 patients with varying types of solid tumor by this method of active specific immunotherapy. Twenty-three patients have completed a course of six months therapy, and 21 of the 23 are followed to within one month of this report.

We have seen no abnormalities of bone marrow, liver or renal function during the course of treatment. There were no significant changes in the hemoglobin, white blood cell count, platelet count, blood urea nitrogen, serum creatinine, serum glutamic oxal-acetate transaminase, alkaline phosphatase or bilirubin.

The results of the patients with breast cancer are included in Table 1. Generally, after surgical excision of the primary lesion, this was the only adjuvant form of therapy utilized. Although the followup time is short, there have been only two recurrences to date, one in a woman who was treated following a skin recurrence after a previously irradiated (and unoperated) breast cancer and the second in a woman who had an intraductal invasive adenocarcinoma with metastases to seven of 11 lymph nodes and whose immunotherapy was preceded by a standard mastectomy.

In the three patients with gastrointestinal tumors, active specific immunotherapy was again the only adjuvant employed after primary resection of the tumor. Their status is shown in Table 1. The two patients with colon cancer would be considered at high risk, one because of invasion through all layers of the bowel wall and the second because of manifest hepatic metastasis at the time of colon resection, (when the hepatic metastasis was resected. The patient with gastric cancer is by definition at high risk and is also free of recurrence at this time.

Table 1 also presents the five patients treated for skin cancer. One patient with widely metastatic squamous cell cancer died; This individual underwent multiple forms of therapy, including several courses of x-ray therapy to osseous metastases and systemic Bleomycin in addition to active specific immunotherapy. Four other patients, all with melanoma, received only adjuvant immunotherapy following resection of their primary lesion, with nodal resection where possible. Three of these four patients were in an advanced stage of disease, using the M.D. Anderson classification, while the one who would be classified as stage 1 disease had a deep level of penetration of melanoma cells. All four patients would be considered at high risk for early recurrence, and all are doing well at this time.

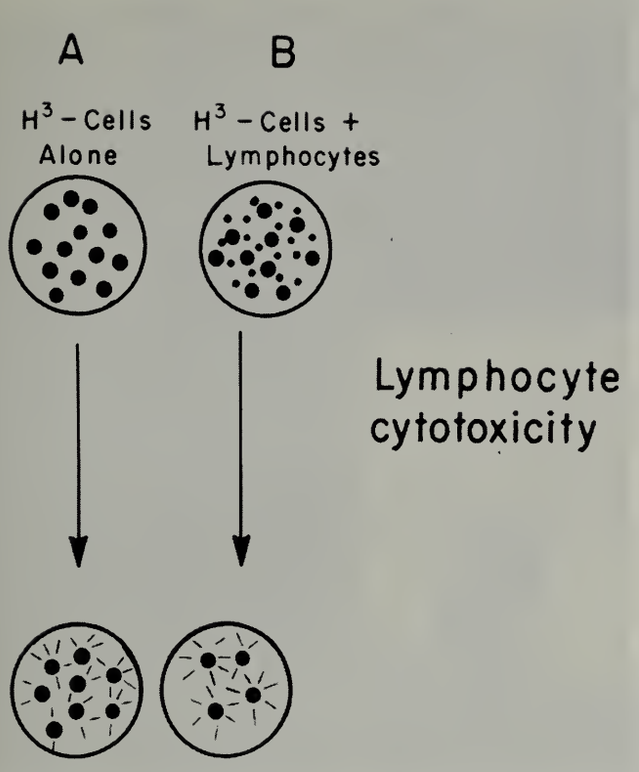
TABLE 1.

Pt.	Extent	Status	Duration
	BREAST		
AK	Localized	Free	15
LC	2/19 Nodes	Free	12
SG	Localized	Free	10
CG	Axillary Recurrence	Free	16
CL	6/8 Nodes	Free	13
ML	Localized	Free	10
CM	Skin Recurrence	Recurrence	17
VN	7/11 Nodes	Recurrence	18
MR	Localized	Free	17
	COLON		
EF	Localized (Dukes B)	Free	24
OG	Nepatic Mets (Resected)	Free	18
	STOMACH		
AS	Localized	Free	14
	SKIN		
BA	Stage 1 Level IV	Free	32
MR (MM)*	Stage 3 (Nodes) Level III	Free	18
PS	Stage 4 (Lung)	Free	9
JV	Stage 3 (Nodes)	Free	30
AS (SQ Cell)	Osseous Mets	Died	4
	FEMALE GENITAL		
DF	Stage 2-Adeno CA. Uterus	Died	6
AM	Stage 3-Recurrent Ovarian	Died	1
BS	Stage 4-Recurrent Ovarian	Died	6
SS	Stage 4-Recurrent Ovarian	Died	15

*Malignant melanoma.

All the patients with tumors of the female reproductive tract, following attempts at surgical cure, received postoperative x-ray therapy and then adjuvant chemotherapy with either single or triple agents. Active immunotherapy was included in their treatment program. All did very poorly, as Table 1 shows, with evidence of recurrent growing tumor within one year of the initial surgery, and all died.

Laboratory studies were made on most of the 23 patients completing immunotherapy in an attempt to assess immune response. In all patients we measured



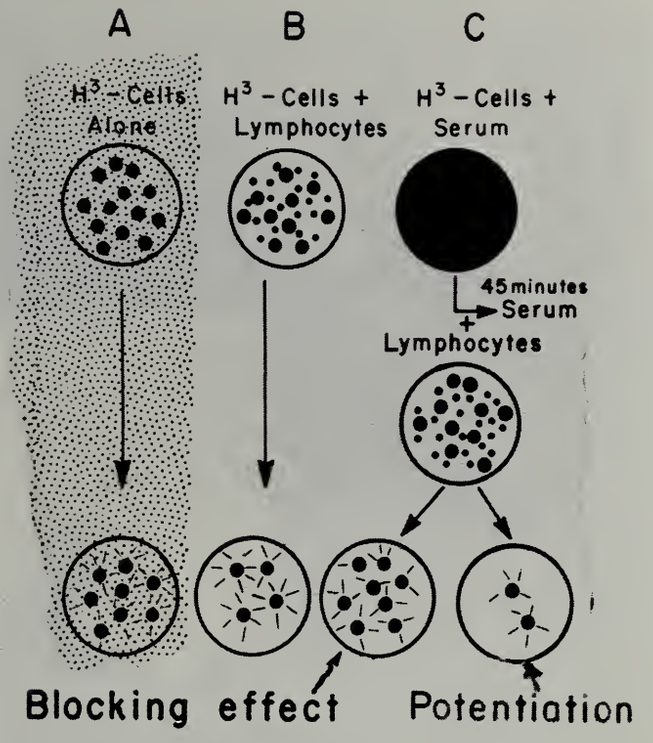


Fig. 1 (left). Lymphocyte cytotoxicity test (LCT). LCT is defined as the counts per minute (A) minus the counts per minute (B) divided by the counts per minute A. Fig. 2 (right). Potentiation and blocking assay. Where the count per minute (C) is greater than the counts per minute (B), blocking exists. Where the counts per minute (C) are less than the count per minutes (B), potentiation exists.

lymphocyte cytotoxicity, using the method described by Pees et al.[4]

In individual wells on a Falcon microtest plate, prelabeled tritiated human tumor cells, maintained in tissue culture, were incubated; and to a similar set of wells, after incubation, patient lymphocytes were added (Fig. 1). The percentage of cytotoxicity was then computed. In addition, we attempted to document blocking and potentiation by exposing the incubated human tumor cells to the patient's (autologous) serum for 45 minutes, thereafter decanting the serum from the well prior to adding lymphocytes collected from the patient (Fig. 2). In this system, the terms "blocking" and "potentiation" refer only to interaction and effects between tumor cells and serum. Where exposure of the patient's tumor cells to serum resulted in fewer cells being killed by subsequent exposure to lymphocytes, the term "blocking" was employed. Conversely, in those situations where the exposure of patient's tumor cells to the patient's serum resulted in a greater killing of tumor cells exposed subsequently to lymphocytes, the term "potentiation" was used. Again, this is defined strictly as the effects of serum on tumor cells and does not relate in any way to the interaction of serum on lymphocytes.

Those patients who died pursuant to therapy had minimal change in lymphocyte cytotoxicity but uniformly presented with blocking effect. Those who survived either free of disease or with recurrent tumor generally showed an increase in lymphocyte cytotoxicity. In the group free of any evidence of recurrence, third showed potentiation, while only two of nine showed any evidence of increasing blocking in the course of treatment.

Most of the patients were responsive to at least one of six common recall antigens employed. Skin reactivity was uniformly present in the responding group, while one of three patients tested in the failure group was anergic.

Summary

Active specific immunotherapy of human solid tumors using enzyme altered cells appears a feasible approach. Our initial results, we believe, warrant continued effort in this area. There seems to be no adverse clinical effects to such treatment. In vitro assay methods to document enhanced immunity must be included in any immunotherapy program. Of equal importance, such test methods should be expanded for the earliest detection of adverse effects, such as blocking during the course of immunotherapy. The role of immunotherapy must be that of adjuvant treatment, and its only applicability will be in that role.

(References on request.)



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Wordsworth

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Epithelial Cyst Of the Gallbladder

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POLYPOID LESIONS of the gallbladder are unusual and are found in less than 0.5% of patients examined by oral cholecystography.[1] This report describes the radiographic findings in a patient with proven intramural epithelial cyst, an extremely rare lesion of the gallbladder.

Case Report

A 61-year-old white female hypochondriac was admitted for evaluation of a cardiac murmur of 25 years duration, ultimately diagnosed as asymmetric septal hypertrophy. There was a long history of vague abdominal complaints. There were no abnormal abdominal findings on physical examination. Laboratory findings included a normal CBC, urinalysis, and SMA-14. An upper gastrointestinal series and barium enema were normal. An oral cholecystogram revealed a 1.0 cm polypoid filling defect in the fundus of the gallbladder (Fig. 1). A review of a previous oral cholecystogram four years earlier showed the polypoid lesion present at that time; there had been no interval increase in size (Fig. 2). There was no sign of gallstones on either study. The radiographic diagnosis was adenoma, unchanged over a four-year interval. A surgical consultant felt that carcinoma could not be excluded, and cholecystectomy was performed. The wall of the gallbladder was thickened in some areas and infiltrated by scattered chronic inflammatory cells. There was an intramural cyst in the area of the fundus about 7-10 mm in diameter, filled with clear fluid. It was lined by uniform cuboidal to columnar cells with oval round nuclei. Aggregates of foamy histiocytes were focally present in the lamina propria. The final pathological diagnosis was epithelial cyst of the gallbladder, chronic cholecystitis, and cholesterolosis. The postoperative course was uneventful. The patient's vague abdominal complaints were still present following discharge.

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Submitted 5-26-77.

Discussion

Only a single well-documented case of epithelial cyst has been previously described.[2] Like the present example, it was apparently an incidental finding at oral cholecystography done as part of a "general checkup". It also was removed to exclude carcinoma. The pathological findings were similar. Such a lesion is so rare as to be considered a sort of cholecystographic curiosity, but it is important in that it may mimic any other small polypoid lesion of the gallbladder. Small polypoid lesions in an otherwise normal gallbladder are virtually indistinguishable on



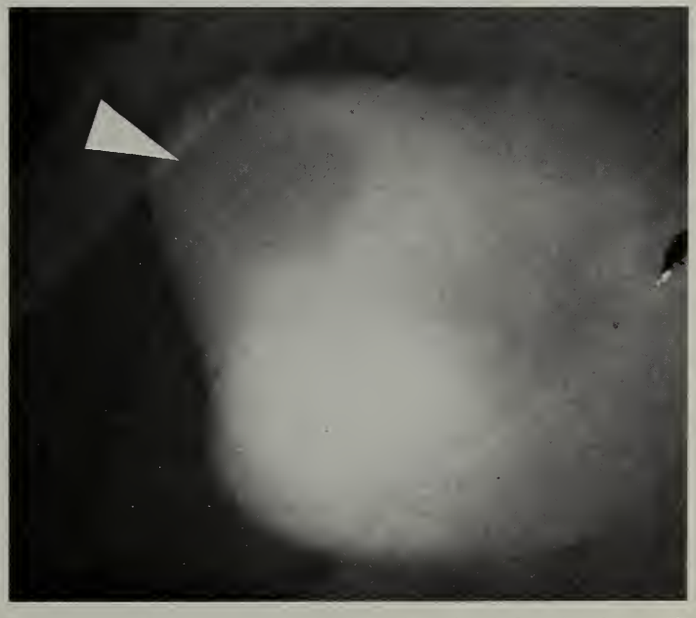


Fig. 1. Oblique upright compression spot radiograph from oral cholecystogram. The smooth polypoid defect in the well-opacified gallbladder is evident (arrow). The gallbladder is otherwise quite normal. Fig. 2. Oblique supine overhead radiograph from oral cholecystogram four years previously. The polypoid defect was present (arrow).

oral cholecystography. Grey scale ultrasound imaging may be able to separate out the rare cystic lesion.

The vast majority of polypoid lesions demonstrated on oral cholecystography are benign adenomas, adenomyomas, or cholesterol polyps.[1] Only a few scattered reports of carcinoma in situ developing in an adenoma,[3] or of carcinoma initially presenting as a small polypoid mass[4] have appeared. Further, most carcinomas are associated with gallstones.[5] Therefore, surgical removal of a small solitary polypoid lesion such as epithelial cyst, unassociated with gallstones, may not always be warranted.[3]

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Oral Therapy For Hypomagnesemia

Michael J. Moore, MD,
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MAGNESIUM-CONTAINING antacids can be helpful in the treatment of hypomagnesemia in patients withdrawing from alcohol; and since the typical alcoholic has gastritis in addition to his other problems, the physician may treat two problems simultaneously.

Absorption of the magnesium in a dosage of 30-90 ml of magnesium antacid four times daily occurs at a rate of 6-15%, depending on the one selected. Thus, 30 ml per dose can provide 10.8-25.2 mEq/day and 90 ml per dose, 32.4-75.6 mEq/day. Interaction of the antacid with acid of the stomach is a preliminary to absorption; therefore, it would be ineffective for a patient with no gastric HC1, i.e., a patient who has undergone subtotal gastrectomy.

If the patient has been drinking moderately for an appreciable period, it is still judicious to use injectable magnesium sulfate (2 ml of 50% solution every 6 hours IM for 2-3 days, or 32.48 mEq/day) along with the oral antacids. This combination has worked well for numerous patients I have treated over the past 15 years and has been used in the treatment of patients with hypomagnesemia not related to alcoholism (Table 1). It may be started in advance for patients planning to cease their intake of alcohol; this seems to smooth the withdrawal course. Difficulties with delirium tremens have been minimal and infrequent with this regimen, in my experience; this is understandable when the physiology of alcohol and magnesium is reviewed.

The clinical manifestations of hypomagnesemia are as follows.

- **Neuromuscular:** Profuse sweating; weakness, muscle fasciculations; muscle cramps; gross physical tremors; positive Chvostek sign (fairly common); positive Trousseau (rare); spontaneous carpopedal spasm (rare).
- **Central Nervous System:** Unsteady gait; personality changes ranging from mild anxiety to apathy to agitation, which may proceed to delirium, frank psychoses, and coma; choreiform and athetoid move-

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ments (rare); convulsions (rare, but may be severe and potentially fatal); fever.

• **Cardiovascular:** Tachycardia, premature ventricular contractions; ventricular fibrillation, and death. (Atrial flutter and fibrillation have been reported in patients with combined heart disease and hypomagnesemia, with response to treatment of hypomagnesemia.).

• **Electrolyte:** Hypocalcemia and nonresponsive hypokalemia with accompanying clinical findings; hypophosphatemia.

• **Electrocardiograms:** Early magnesium deficiency—tall, peaked T waves, and normal QT interval (T waves not as narrow as in hyperkalemia); the T waves resemble the "spinous" T wave associated with alcoholism. Late, or prolonged magnesium deficiency—prolonged PR interval, wide QRS complexes, St segment depression, and low T waves.[1]

• **Electroencephalograms:** Nonspecific slowing and low voltage of EEG.

A recent review of alcohol intoxication and withdrawal states, "Though intravenous and intramuscular administration of magnesium may suppress withdrawal seizures, cardiac arrhythmias, and tremor, other drugs are as effective in these respects and probably less toxic, for example, diazepam, procainamide, and propranolol".[2] It is my experience, however, that magnesium is less toxic, more specific, and more effective than the suggested medications.

Therapy for Hypomagnesemia.

IM Therapy (50% solution magnesium sulfate).

Day 1: 2.0 gm (16.3mEq) every 2 hrs for 3 doses, then every 4 hrs for 4 doses.

Day 2: 1.0 gm (8.1 mEq) every 4 hrs for 6 doses.

Day 3-5: 1.0 gm every 6 hrs (total 260 mEq).

IV Therapy (if patient convulsing).

Day 1: 5.0 gm (41 mEq) in 1000 ml fluid. Infuse over 3 hrs. Follow with 5.0 gm in each of 2 one-liter solutions, given during the day.

Day 2: Total of 6.0 gm (49 mEq) given equally in total fluids scheduled for the day.

IV Therapy for Magnesium-Associated, Nonresponsive Arrhythmias.

10-15 ml 20% solution given IV over 1-min period, followed by slow 4-6 hr infusion 500 ml 2% magnesium sulfate in 5% dextrose.

Hypomagnesemia Prevention in Patients Receiving IV Fluids.

Daily addition to IV fluids of 1-2 gm magnesium sulfate (8-16 mEq). Note: The standard IV electrolyte solutions supply minimal (3-5 mgm) magnesium.

Unfortunately, confusion still arises concerning the value of magnesium replacement[3] by virtue of references to an article in 1964 by Fankushen.[4] His series of hypomagnesemic patients developed normal magnesium levels after 87, 54, 12, 26 days, etc., without specific treatment with magnesium. However, their alcohol intake had ceased, which would curb the excess magnesium excretion, and they received a normal diet, which would slowly replace their magnesium. In the final analysis 1) time has passed and more is known in 1977 about hypomagnesemia; 2) this simply represented a very slow way to treat magnesium deficiency; 3) a physician using this earlier program of therapy might be sued today for malpractice.

Renal failure will usually be a contraindication to instituting or continuing magnesium therapy, although a clinical point of interest has been made that the presence of knee jerks "can almost invariably be relied on to suggest there is no life-threatening hypermagnesemia."[5] Since ethanol use can cause phosphate depletion as well as hypomagnesemia, and since antacids can worsen the phosphate depletion, the attending physician should be aware of the syndrome of hypophosphatemia, and be prepared to treat the patient with milk or an oral or IV phosphate solution.[6]

It is pertinent to note that certain foods are rich in magnesium. These are nuts, legumes, cereal grains, dark green vegetables, seafood, cocoa, and chocolate.

While it is unlikely that a program of intramuscular and oral magnesium will be 100% effective with 100% of one's patients, it probably will be more effective than any other measures previously tried and can ease the strain of illness for the patient and his family.

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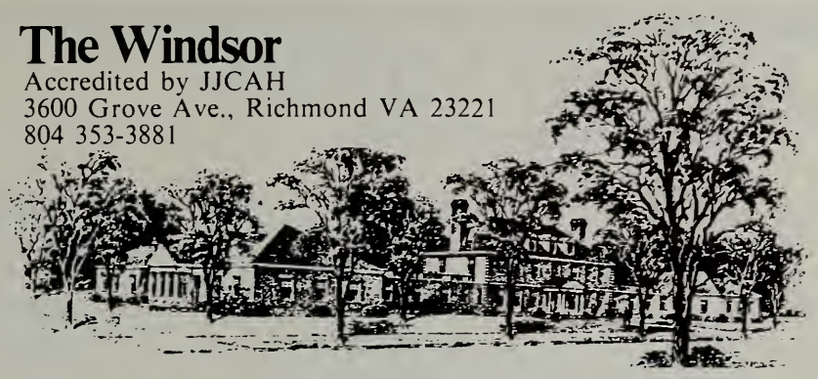
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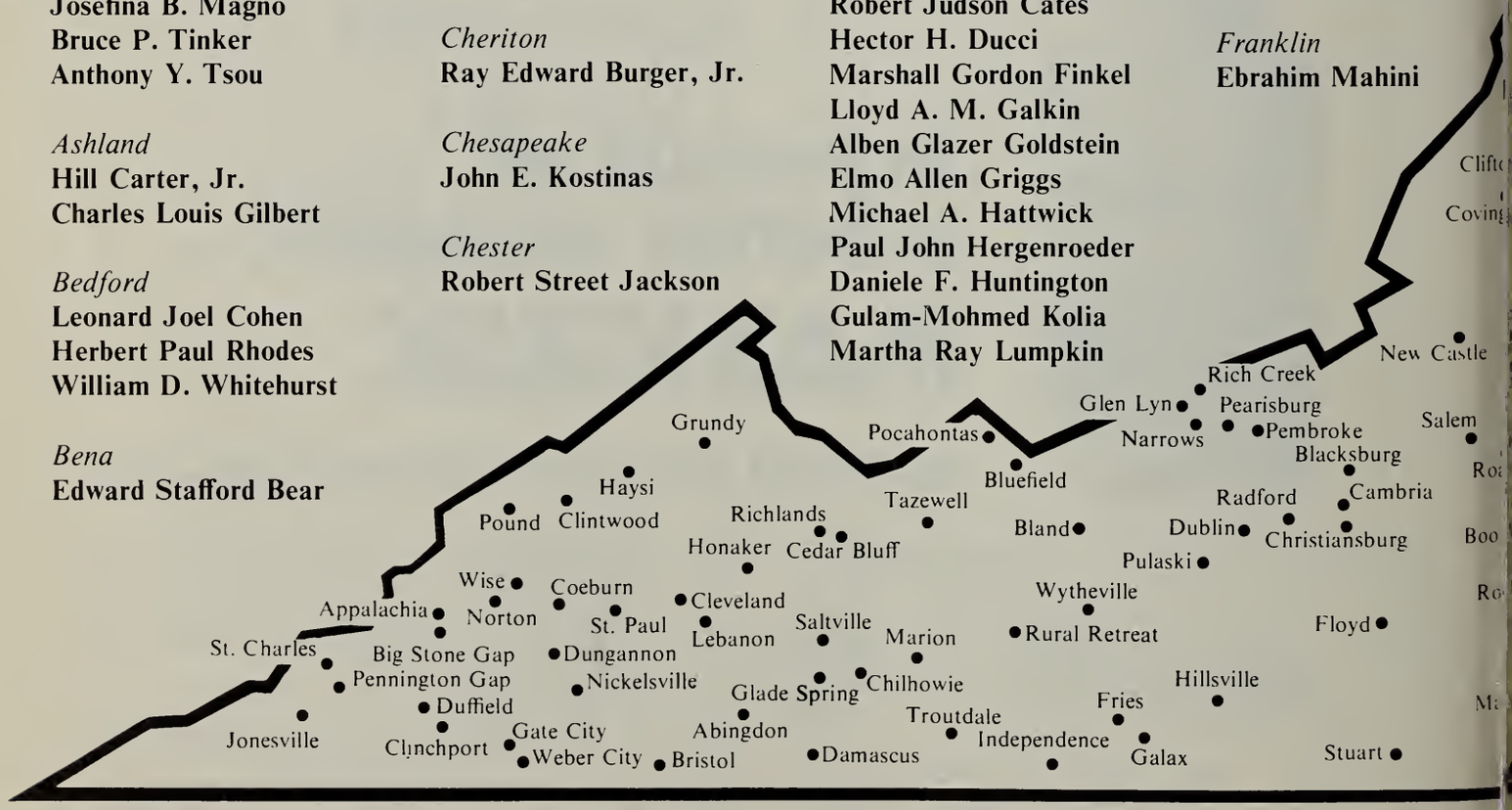
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(*Continued next page.*)



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(*More new members page 245*).

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VIRGINIA MEDICAL

EDITORIAL

Will the PSRO Data System Be an Effective Clinical Record?

TITANIC improvements are occurring in computer technology today and are beginning to affect the ethical and technologic foundations of the medical care system. It is important that physicians be aware of these changes in technology, consider their impact, and support actions which can influence their course in a manner ethically sound and beneficial to patients.

Hospitals, laboratories, and group practices are utilizing computers for business and billing systems. Tumor registeries and the Professional Activity Study (PAS) are familiar systems which store and transfer clinical abstracts on a small scale. These banks of data, however, are dwarfed by the two massive clinical data systems currently being sponsored by the federal government. One of these in particular, the data system of the Professional Standards Review Organization (PSRO), should be addressed by the profession.

Technology is in place that can record every individual lifetime medical history. Daily it becomes cheaper and easier to store and to transfer information. By 1980 new "bubble" memories will be in use; these could store the contents of the Library of Congress on a device not much larger than a 50¢ piece. Vast amounts of data will be stored at a cost of pennies and will be accessible over great distances within seconds.

The PSRO data system is being developed by the Bureau of Quality Assurance; initially it will be for patients covered by federal health programs. The Comprehensive Health Statistics System (CHSS) is being developed jointly by the National Center for Health Statistics and state health departments to cover all patients. Both of these data systems have important legal and financial clout; each collects clinical abstracts of hospital stay for statistical and quality analysis; and each has established pilot projects to anticipate the collection of abstracts derived from nursing home and office-based care. Though one might quibble over fine points, the latter approximates the whole patient record. Indeed, though developed strictly for administrative purposes, the computerized outpatient profile utilized by the San Joaquin Foundation for Medical Care would be a reasonable substitute for a chart. It contains all diagnoses, prescriptions, and procedures ordered by any and every physician in the San Joaquin Valley.

A computerized lifetime medical record, then, is no longer theoretical. It is here. As medical data is collected and computerized, physicians must be alert. Storage, transfer, and analysis of clinical information is developing rapidly and must be related to, and restricted by, the ethics of the doctor-patient relationship. The profession can no longer ignore a data system which proposes to store clinical data believing it to be an "administrative system". Our profession should not consider either the PSRO system or the CHSS as irrelevant to the patient-care process. We must be sure that the systems develop financially and ethically so as to assist with patient care.

The PSRO program was mandated by federal law, but the PSRO itself is not a federal agency. It is a corporation of physicians who have contracted with the federal government to help assess and manage federal health programs. It has the option of becom-

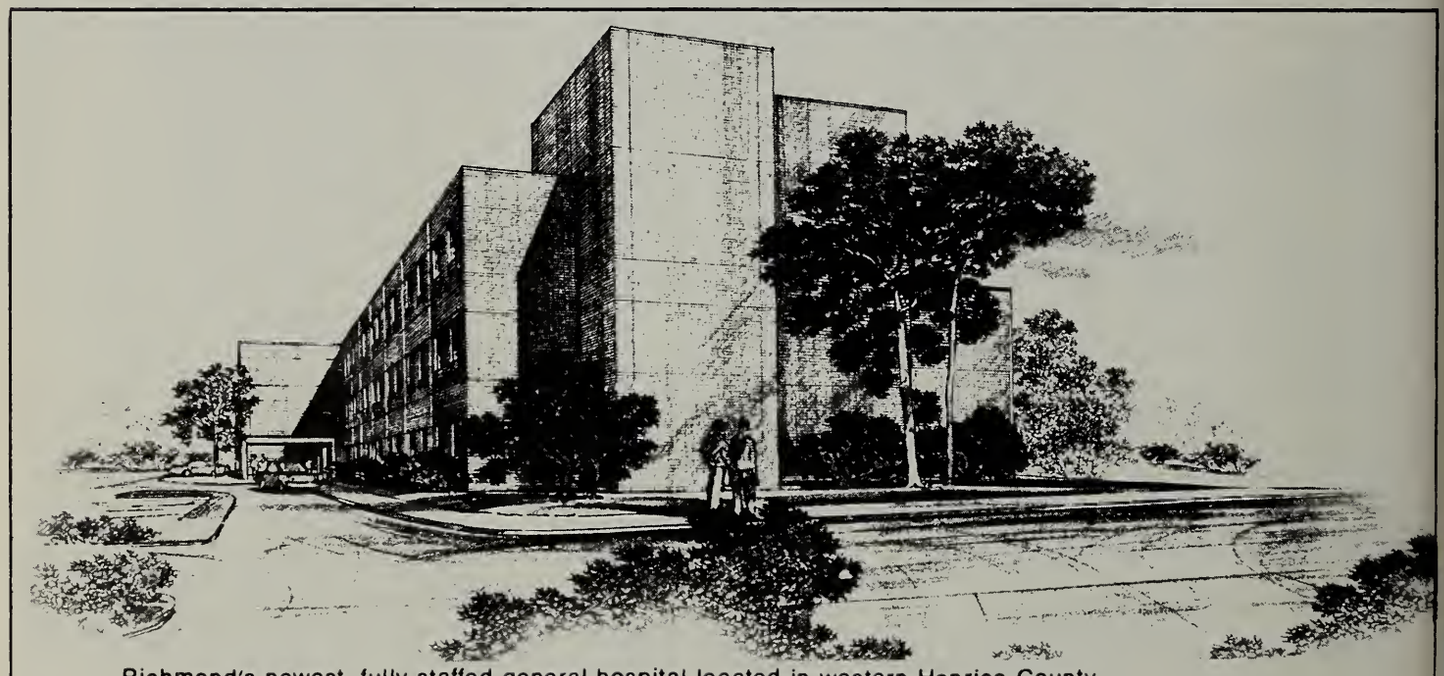
ing primarily regulatory or primarily clinical in its orientation. It can pay for its programs primarily through its federal contract or primarily by developing resources derived from direct patient-care dollars. If it acts decisively, any PSRO can develop or utilize any type of data system which it deems appropriate. It is in a position to be the cutting edge of an innovative professional contribution to the problems of automating medical data.

Physicians should make sure that the PSRO data system will have certain characteristics:

- Abstracted clinical data should be accurate.
- Identified clinical data should be made available for both patient care and hospital management. The hospitals (and thus the patient) should be asked to bear those costs which exceed federal requirements, but are necessary to make the information system useful for patient care.
- The data system should encompass all patients (federal and nonfederal).
- Identified personal data should be viewed as part of the patient's medical record. This intensely personal data must be handled in a manner which will assure privacy and confidentiality.
- The question of who shall own the data is not settled, but should be considered now by each PSRO. Either the patient, the hospital or the PSRO could eventually be assigned ownership.

Three of the five PSROs in Virginia are now beginning to establish their data policies and procedures. As each does so, it must make decisions about the content and use of this major, extrainstitutional computerized clinical information system. If each PSRO acts decisively to develop a significant nonfederal financial base, its data system can grow beyond basic federal guidelines and become a major vehicle for improved patient care. If the PSRO data system is ignored, it may expose sensitive clinical data from patient records and erode the doctor-patient relationship. Physicians on the boards of PSROs are now making the decisions governing the content and policies of the PSRO data system. These decision-makers should view the PSRO data system as a clinical record which will directly affect the process of patient care.

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VIRGINIA MEDICAL OBITUARY

Malcolm Stinnett, MD

At the age of 77 years, Dr. Malcolm Stinnett, Buchanan, died November 29, 1977. He had been a member of The Medical Society of Virginia for 40 years. Dr. Stinnett, a general practitioner, devoted great energy to civic affairs and served for many years as a member of Buchanan's town council. He had been president of both the Rotary and Lions Clubs in Buchanan and belonged to the Roanoke Academy of Medicine and the American Medical Association.

Manfred Call, III, MD

Dr. Manfred Call, III, died unexpectedly at his Richmond home on January 2 at the age of 72 years. Dr. Call was graduated from the University of Virginia School of Medicine, trained at Wesley Memorial Hospital, Chicago, and had practiced internal medicine at Stuart Circle Hospital in Richmond for 46 years. He was a member of the Richmond Academy of Medicine, The Medical Society of Virginia, and the American Medical Association.

Harold M. Jackson, MD

Dr. Harold M. Jackson, a native of Leesburg and a general practitioner there since 1950, died December 13. He was 65 years old.

Dr. Jackson was graduated from the University of Virginia School of Medicine. He began his medical practice at Purcellville and then practiced for four years in Fayette County, West Virginia, before returning to Leesburg to establish his practice there. He was a past president of the Loudoun County Medical Society and the medical staff of the Loudoun Memorial Hospital.

William Arthur Cover, MD

Dr. William Arthur Cover, Tazewell, died December 22 in a Richlands hospital after a short illness. He was 64 years old and had retired from private practice in 1969 to serve as director of the Cumberland Plateau Health District.

A native of Elkton, Virginia, Dr. Cover was graduated from Washington and Lee University and the University of Virginia School of Medicine. He trained at the Virginia Mason Hospital in Seattle and then practiced medicine in McDowell County, West Virginia; Buchanan and Tazewell Counties in Virginia; and Pike County, Kentucky. He was a member of the Tazewell County Medical Society and had belonged to The Medical Society of Virginia for 27 years.

Robert P. Ostergard 1912-1977

By John R. Tietjen, MD

Dr. Robert P. Ostergard, Petersburg, died December 9, 1977, at the age of 65 years.

Dr. Ostergard was born in Cleveland, Ohio, and was a graduate of the Vanderbilt University School of Medicine in Nashville, Tennessee. He completed his internship at the Children's Memorial Hospital in Montreal, Canada, and his residency in pediatrics at University Hospitals in Cleveland.

During World War II, Dr. Ostergard was chief of medicine of the 35th Evacuation Hospital, stationed in England, France and Germany. He was awarded the Bronze Star for service during the Battle of the Bulge.

In 1946, Dr. Ostergard joined the staff at Trumbull Memorial Hospital, Warren, Ohio, and was named chief of pediatrics. In 1953 he and several other pediatricians formed the Children's Medical Group. He was the recipient of the Family Service Award in 1962 for his work with adopted children. In 1967 he became affiliated with the State Health Department of Virginia and was appointed the chief clinician for the Crater Health District, with the main clinic in Petersburg, Virginia. He recently instigated a teaching program on behalf of the department of pediatrics, Medical College of Virginia, in the field of community pediatrics.

He had memberships in the Academy of International Medicine, the Northern Ohio Pediatrics Society, the Trumbull County Medical Society, the Medical Society of Southside Virginia, the medical faculty of Petersburg General Hospital, the American Medical Association, and The Medical Society of Virginia. He was a Fellow in the American Academy of Pediatrics and was certified by the American Board of Pediatrics.

THE AUXILIARY

Roanoke Physicians Applaud This Auxiliary Project

Auxilians of the Roanoke Academy of Medicine are engaged in a project that has their husbands beaming—emergency medical training. In cooperation with the Red Cross, the Auxiliary is offering instruction in the approved methods for resuscitating infants and adults whose lives are threatened by cardiac failure, choking, and other cardio-pulmonary emergencies. To date, eight auxilians have become certified instructors in these techniques so that they can lead classes, and 20 auxilians and friends have graduated from the course with CPR certificates. The project originated with Mrs. Thomas R. Henretta, chairman of the Roanoke Auxiliary's Health Education Committee.



The CPR class watches Mrs. George H. Batchelor, auxilian-instructor, demonstrate the Heimlich maneuver for victims of choking; the "patient" in the chair is Mrs. George H. Cudworth, president of the Roanoke Auxiliary and a certified instructor herself. Studying the demonstration are, left to right, Mrs. Richard H. Fisher, Mrs. Henretta, Mrs. Donald J. Race, Mrs. Reuben DeL. Knopf, Mrs. M. Kemper Humphries, Mrs. Patty Wilhite, Mrs. Jeanine Hanson, and Mrs. David N. Keys.



Mouth-to-mouth resuscitation of an infant is shown to the class by Mrs. Douglas E. Pierce, auxilian and CPR instructor. Her students are, left to right, Mrs. Cudworth, Mrs. Keith C. Edmunds, Mrs. Race, Mrs. Knopf, Mrs. Willhite, Mrs. Humphries.



How to save the life of an adult with cardiac failure is taught by Mrs. Henretta, who applies chest compression to the prostrate manakin, and Mrs. Humphries, who demonstrates CPR breathing technique. Mrs. Knopf bends to watch.

WHO'S WHO IN VIRGINIA MEDICINE

Six doctors from out of the state have recently become new MSV members. They are **Benjamin V. Rezba,** *West Hartford, Connecticut;* **Michael Thomas Horan,** *Washington, DC;* **John L. Lucas,** *Annapolis, Maryland;* **Bernard Melvin Snyder,** *Rockville, Maryland;* **Michael John Kovac, Jr.,** *Marlton, New Jersey;* and **Lawson A. Moyer, III,** *New York, New York.*

Dr. **Theodore E. Keats,** *Charlottesville,* is the author of *An Atlas of Normal Development Roentgen Anatomy,* newly published by Year Book Publishers, Chicago. Called "the first photographically complete book on the normal development of human anatomy through x-rays, from infancy to adulthood," the 864-page volume is the third book by Dr. Keats. Its 779 illustrations show a composite individual, at 3-month intervals through the first two years of life, then by yearly intervals to adult maturity. Dr. Keats is chairman of the radiology department at the University of Virginia. He contributes frequently to VIRGINIA MEDICAL; indeed, a manuscript of his entitled "Fat Stripe: Aid in Diagnosing Distal Radial Fractures" is now waiting for publication.

Dr. **L. Benjamin Sheppard,** *Richmond,* whose article on the life of an early Virginia physician, John Peter Mettauer, was featured in VIRGINIA MEDICAL's July, 1977, issue, was the speaker recently at Hampden-Sydney College, Farmville, in an evening celebrating the College's special medical exhibit of objects, books, and pictures relating to Mettauer. Dr. Mettauer was graduated from Hampden-Sydney in 1811.

These doctors have been elected to lead the Alexandria Medical Society: Dr. **Eugene R. Jacobs,** president; Dr. **William Sheely,** president-elect; Dr. **Hernando Salcedo,** vice-president; Dr. **Elmer Bigley,** secretary; and Dr. **Thomas J. Sullivan,** treasurer.

For his assistance in the Nottoway County Special Olympics Program, Dr. **Alfred Brassel,** *Blackstone,* was given a certificate of appreciation by the Parents Advisory Committee of Nottoway Senior High School.

New officers of the Richmond Academy of Medicine are Dr. **William C. Gill, Jr.,** president; Dr. **Charles M. Zacharias,** president-elect; Dr. **Duncan S. Owen** and Dr. **E. Randolph Trice,** vice-presidents; and Dr. **Emerson D. Farley,** recording secretary.

Dr. Watson Buchanan, chief of rheumatology, University of Glasgow, will be the Thomas lecturer at the Medical College of Virginia on April 11. His topic: "Application of Basic Anatomy to the Study of Rheumatological Diseases." The time is 12 o'clock noon; the place, George Ben Johnston auditorium.

Dr. **William H. Markle,** *Mannboro,* recently was named an Outstanding Young Man by the Amelia Court House Jaycees.

New president of the Virginia Pathology Society is Dr. **George P. Vennart,** who also is the new chairman of the pathology department at the Medical College of Virginia.



VIRGINIA MEDICAL CLASSIFIED

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VIRGINIA HEART INSTITUTE—Physicians interested in clinical research are needed to perform and evaluate noninvasive (stress testing, ultrasound, nuclear imaging) and coronary arteriographic procedures. Full or part-time positions are available. Interested individuals should provide CV and apply to Charles L. Baird, Jr., MD, Director, Virginia Heart Institute, 205 N. Hamilton St., Richmond VA 23221.

CLINICIAN WANTED—Busy medical clinic of Petersburg Health Department needs full-time staff physician. Clinic serves local community, adult medicine, broad pathology. Experienced ancillary staff, service oriented. 40-hour week, full State benefits, Virginia license. Salary $30,600 to $38,000. An Equal Opportunity Employer. Phone or write: Dr. John R. Tietjen, 35 W. Fillmore St., Petersburg VA 23803, 804 861-4286.

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EMERGENCY PHYSICIAN—Lakshmaiah Manduru, MD, S.V. University, India, 1960, age 40, 11 years surgical experience, emergency medicine since July 1973, seeks relocation in Virginia. Prefer fee for service. Available Spring 1978. Address inquiries to 9 Camelot Drive, East Brunswick NJ 08816.

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"The alternative is to watch a fine profession turn into a trade."

Memo to: All MSV Members
From: William J. Hagood, Jr., President

By now you have learned Council voted unanimously to finance the Society's initial efforts to deal properly with PL 93-641 by assessing each member $50. That's the HSA thing which, if the federal administration has its way, will dominate our professional lives.

Doctor, I know commitments to patients, family, church and civic activities has left you little time to realize the profundity of the National Health Planning and Resources Development Act hastily passed by Congress and pretty much ignored by people in the medical community in 1974. However, in answer to the many questions you have, I can only advise you to pay the $50, which is less than the price of two shirts and a tie and less than half of what's being assessed by much smaller societies. And get ready to give more—from your time, your pocket, and from your heart.

You recall the furor raised by HEW's proposed national guidelines last September. After more than 55,000 protest letters descended on Washington, HEW had to back off and take a second look at their marvel. Then Secretary Califano published a second, more diluted set of guidelines in the January 20th *Federal Register*. Your Society vigorously responded to both calls and registered its objections. And, on February 1, I testified before the subcommittee on Public Health and Environment of Congressman Rogers' amendments to the Health Planning Act to register our concerns with the way it is being implemented in Virginia and to protest the proposed expansion of powers Rogers intends to give to the Secretary of HEW and to HSA's.

Due to an astute move by Congressman Satterfield, the Society as well as all those who had testified were given a unique opportunity—a chance to review and comment on the curiously tardy set of new amendments to the Act which HEW had drafted and wanted passed. With swift help from hired professionals, it was possible for us to respond. On each

occasion, the period of time allowed for a response was shorter than the labor of a grand multip.

In an effort to properly deal with federal and state health planning legislative and regulatory activities, I appointed the Vanguard Committee on November 19th. Chairman Dr. Richard L. Fields and his Committee, composed of two members with HSA experience from each of Virginia's five HSA's, soon learned this first assignment demanded full-time professional help. Otherwise those 11 practicing physicians would have to devote all their waking hours to HSA activities alone. And that's out of the question. Various health plans and applications from all five HSA's, some weighing five pounds or more, faced them. And there was no way the Vanguard Committee could effectively review and respond or give support to local efforts being made. After fighting to get out from under that first avalanche of federal paper, Chairman Fields came before Council and, Doctor, I have never heard a man speak with more fervor and conviction. He said that "the health planning issue is the most important ever to confront the medical profession. It is paramount that physicians realize quality of care must not be sacrificed because of federal intervention." The two recommendations he put before Council were unanimously adopted: first, a request that local Vanguard Committees be established in each component society, and the second called for employment of full-time personnel to provide expertise needed to accomplish the committee's objectives. This will mean that a secretary and administrative secretary to the Committee will come aboard at headquarters, and their work will be supported by two consultant firms on a contractual basis. The contracted services include collecting, analyzing and supplying technical data and then effectively communicating it to the profession, the public, planning groups, agencies and Congress through the most appropriate people on local and state levels. They will also help the Vanguard Committees develop their own expertise, diminishing the amount of outside assistance needed.

At the state level Vanguard, the Society, new staff, and consultants will also be attending selected HSA and SHCC meetings, monitoring health legislation, preparing testimony, rallying support from other interested non-physician groups; reviewing health plans and making recommendations for revisions; surveying physicians and the public on HSA, cost contain-

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ment, and other matters, preparing monthly bulletins, identifying local issues and problems and beginning various educational processes that will be constantly monitored for impact. In other words, we'll soon have full systems of information exchange.

Now, the cost.

The full-time staff plus consultant support is known to be about $210,000 for the first full year. Because we pay as we learn, thereafter it should decrease. Again, Council's response to this challenge was swift and decisive and voted unanimously to assess the Society's members $50.

This assessment will cover the first year. You see, HSA's, decertification of hospitals, regulation of physicians' offices are only the beginning—national health insurance legislation has been in the making for years and it is on the way. Mr. Califano made it very clear again while testifying on S1470, the hospital cost containment bill, that HEW was developing a complementary plan to contain physicians' fees.

We've already won some victories in Virginia.

What are other states doing? Texas is spending 3 million dollars and California has set up an "embassy" in Washington but they cannot yet help physicians on the local level. Many are groping for the way to start. No longer can our Society justify having the third lowest dues in the nation.

Doctor, initially I said we have to put our money, time and heart in this thing—the alternative is to watch a fine profession turn into a trade. ■

Beware!

High jury awards are hitting Virginia doctors hard. In the last two years there were eleven professional liability verdicts or settlements in Virginia in excess of $100,000. Yet 50% of MSV members have only the basic coverage of $100,000-$300,000.

The MSV carrier offers excess limits of liability up to $1 million. As a rule, it is available for the asking, without a detailed application.

If you have not already done so, consider protecting yourself with this excess limits coverage. Your local agent has the specifics.

**This message is a service of
The Medical Society of Virginia.**

KEY ACTIONS OF COUNCIL

The Medical Society of Virginia's Councilors took these key actions at their meeting on February 4 at the Richmond Hyatt House. A complete report of all decisions at this meeting will appear in the May issue. See also the MSV President's message on page 250.

Vanguard Committee.

Deliberations at Vanguard Committee meetings have emphasized the health planning issue, according to Dr. Richard L. Fields, chairman, who termed it "the most important issue ever to confront the medical profession." He offered two recommendations: 1) establishment of a local Vanguard Committee in each component society; 2) employment of full-time staff personnel to provide professional impetus to the Committee's objectives. Both recommendations were adopted by Council.

The activities of the professional staff were treated in a recommendation by Dr. George Contis; these were concerned with reviews of HSA plans in depth, setting up of monitoring systems, monthly newsletters for all physicians, identification of state and national action, and other similar aspects.

To cover the cost of the professional program as recommended, Dr. Fields presented a proposed Vanguard budget of $119,000, calling attention to the $1 million budget for a similar effort in Texas.

The recommendations of both Dr. Contis and Dr. Fields were adopted by Council.

On the motion of Dr. W. Leonard Weyl, the Councilors then approved an assessment of $50 to each MSV member to cover the cost of the adopted budget.

Annual Meeting 1979.

Dr. Charles E. Davis, Jr., recommended that the dates of the Annual Meeting 1979 at the Homestead be changed from late in October to November 1 to 4; this would take advantage of seasonal rates and afford significant savings to those attending the meeting. The Council adopted the recommendation.

Insurance Committee.

At the recommendation of the Insurance Committee, the Council adopted a Society-sponsored program combining motor vehicle leasing and a personal loan plan administered by the Commercial Credit Corporation. Dr. Davis praised the company's reputation and said the program carried no risk for the Society.

The Society's Blue Cross/Blue Shield program was discussed by staff member James L. Moore, who reported the need for a 15% premium increase to meet inflationary factors. The Insurance Committee also recommended that the plan be amended to provide UCR payments for out-of-state services, reimbursement for outpatient medical emergencies, and a return to longer periods of coverage for nervous and mental conditions.

All of the recommendations were adopted. The Council's action increases the coverage for nervous and mental conditions to 365 days; this takes the total monthly premium for a family to $97.66.

Professional Liability Limits.

The Councilors were surprised to learn that only 50% of all Virginia physicians carry professional liability coverage in excess of the basic $100,000/300,000. This was brought out with the report that in the last two years there were in Virginia 11 verdicts or settlements in excess of $100,000. The Councilors agreed that MSV members should be urged to carry excess coverage of at least $500,000/$1 million.

AMA Jail Project.

The Society has been asked by the American Medical Association and Virginia law enforcement agencies to participate in a program to improve medical care and health services in Virginia's jails, with all expenses to be borne by the AMA. Dr. James B. Kenley, State Commissioner of Health, urged MSV participation. A motion by Dr. Robert V. Gailliot to implement the program in Virginia was adopted.

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LETTERS

Where Are You, Alpha Omega Alpha Members?

As president of the Brown-Sequard chapter of Alpha Omega Alpha at the Medical College of Virginia I have been disappointed to see few alumni members, aside from MCV faculty and housestaff, at AOA functions, and I'm afraid it is my fault. I have been unable to contact many members in the Richmond area, as my list of alumni is out of date and incomplete. Activities this year include the selection of new members, the planning of Kinloch Nelson Student Honors Day (with presentations of student research, recognition of outstanding students, and a talk by a guest speaker), and the annual banquet in the spring.

Any member not now receiving notices from the officers at MCV is welcome to notify me of this shortcoming, and in the future perhaps we can see more of our uptown colleagues.

Neil A. Martin

Box 373, MCV Station
Richmond VA 23298

Tribute to a Physician

The following letter was published in the "Voice of the People" columns of the Richmond Times-Dispatch *on November 8, 1977. It is reprinted by permission.*

In the recent death of Dr. James Bannister Stone, Richmond lost one of its most humanitarian and brilliant pediatricians. Dr. Stone was a legend in Richmond. His "children" were so numerous that it is impossible to account for them. Many of them are practicing physicians at the present time.

Dr. Stone represented the country doctor who would come at three o'clock in the morning in rain or snow storms—at any time he was called if a child was ill. I am the mother of two of these children and they absolutely adored him.

His office at 2042 Park Ave. was unique. There were pictures of his patients on all four walls up to the ceiling. A nice electric fan kept the air rotating and his swivel chair squeaked as he turned toward his Victorian desk to refer to a book or write a notation for a mother to put in her little blue book. An atmosphere of warmth and security prevailed.

Dr. Stone was highly regarded and recognized at Johnston-Willis Hospital as an outstanding doctor and superior diagnostician. He was elected to Phi Beta Kappa when he was a student at the University of Virginia.

He had lost both of his legs because of poor circulation the year preceding his death. Of his 84 years he spent 50 of them in the practice of pediatrics.

Nancy Rose Lewis

Richmond, Virginia

"Medicare and Medicaid Should be a Lesson"

I am sorry to see expressed so often in AMA publications the AMA's continued acceptance of government interference in medical practice. From my point of view, as a citizen who would pay for it and a doctor who would be restricted by it, national health insurance is totally unacceptable *in any form.*

Medicare and Medicaid should be a lesson, even if the Social Security and post office systems are not. I think national health insurance would be bad for patients, taxpayers, doctors, and hospitals; and, until the Medicare, Medicaid, Society Security, and post office systems can be made economically feasible, national health insurance should not even be considered.

I would like to join a group that is absolutely against government interference in medical and hospital affairs. Do you know of such a group?

Bruce E. Baker, MD

150 Olde Greenwich Drive
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ASPEN MUSHROOM CONFERENCE

Identification of edible, poisonous, and hallucinogenic mushrooms. Treatment of mushroom poisoning. Microscopy. Novice and advanced courses. AMA Category I. August 13-18, 1978. Wildwood Inn, Snowmass-at-Aspen, Colorado. Contact Beth Israel Hospital, 1601 Lowell Blvd., Denver CO 80204, 303 825-2190 Ext. 359.

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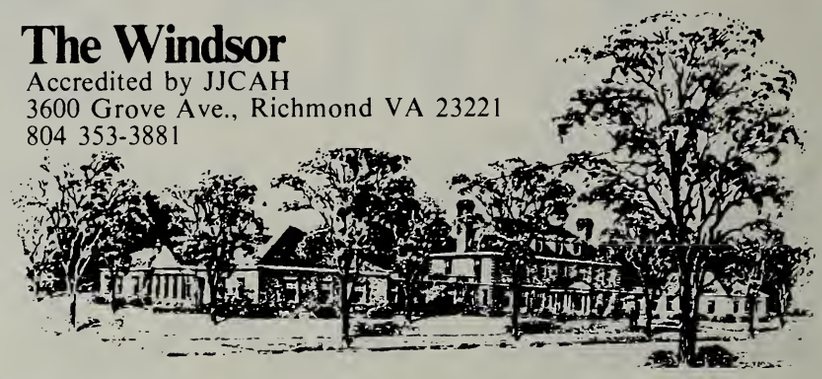
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MEETINGS ABOUT MEDICINE

April

Annual Lecture Series on **Surgery** of the Upper Extremity, sponsored by Divisions of Orthopedic and Plastic-Reconstructive Surgery, Medical College of Virginia, *Richmond,* April 20–22. MCV-CME.

Hand Symposium, sponsored by Georgetown University, Hyatt Regency Hotel, *Washington, DC,* April 20-21. Norman J. Cowen, MD, 106 Irving Street, NW, Washington, DC 20010.

Holistic Healing in a Spiritual Setting, Ninth Annual Symposium on Medicine and Religion, Naval Regional Medical Center, *Portsmouth,* April 20. Robert R. Mitchell, LCDR, CHC, Naval Regional Medical Center, Portsmouth VA 23708.

A Day in **Endocrinology,** sponsored by Department of Internal Medicine, University of Virginia School of Medicine, *Charlottesville,* April 21. UVa-CME.

Vest Memorial Lectureship, sponsored by Department of **Urology,** University of Virginia School of Medicine, *Charlottesville,* April 27–28. UVa-CME.

17th Annual Swineford Allergy Conference, sponsored by Allergy Divison, University of Virginia School of Medicine, *Charlottesville,* April 28.

Practical Advances in Diagnostic **Radiology** and **Nuclear Medicine**, sponsored by Johns Hopkins Medical Institutions, *Baltimore*, April 25-28. Program Coordinator, Turner Auditorium Room 22, 720 Rutland Avenue, Baltimore MD 21205.

May

American Society of **Internal Medicine,** Annual Meeting, Hyatt Regency, *San Francisco,* May 4-7. ASIM, 703 Market Street, San Francisco CA 94103, or call 415 777-1000.

Virginia **Surgical** Society, Annual Meeting, the Homestead, *Hot Springs,* May 12-13. Dr. Stuart H. Harris, Jr., 1911 Thomson Drive, Lynchburg VA 24501.

Advances in Clinical **Pediatrics** for the Practicing Physician, sponsored by MCV Department of Pediatrics, *Williamsburg*, May 12-14. Dr. Nancy B. McWilliams, Box 121, MCV Station, Richmond 23298.

Annual Spring Forum for Child **Psychiatry**, sponsored by MCV Division of Child Psychiatry, and the Virginia Treatment Center for Children, *Richmond*, May 19. Dept. of CME, Box 91, MCV Station, Richmond 23298, 804 770-8207.

Symposium on Recent Advances and Common Problems in **Pediatrics,** sponsored by Children's Hospital National Medical Center, *Washington, DC,* May 10-12. Susan Weiss, 13407 Brackley Terrace, Silver Spring MD 20904.

Clinical **Rheumatology** for the Practicing Physician, presented by the Virginia Chapter of the Arthritis Foundation, Medical College of Virginia, University of Virginia School of Medicine, and Eastern Virginia Medical School, Bonhomme Richard Inn, *Williamsburg,* May 19-20. Virginia Chapter of the Arthritis Foundation, PO Box 5069, Richmond 23220, 804 353-4471.

June

The Child and Adolescent with Spinal Cord Injury, sponsored by the **Children's Rehabilitation** Center and Division of CME, University of Virginia, *Charlottesville,* June 1. Anne Raynor, Conference Coordinator, 804 924-5161.

Rehabilitation of the Traumatic Brain-Injured Adult, sponsored by the Medical College of Virginia, Hyatt House, *Richmond,* June 8-10. Ms. P. Reams, Dept. of CME, Box 91, MCV Station, Richmond VA 23298.

Current **Drug Use in Pregnancy,** sponsored by the Johns Hopkins Medical Institutions, Cross Keys Inn, *Baltimore,* June 16-17. Office of Continuing Education, 720 Rutland Avenue, Baltimore MD 21205, or call 301 955-5880.

The Art and Science of **Sports Medicine,** sponsored by the Division of Sports Medicine, University of Virginia, *Charlottesville,* June 21-24. Dr. Frank C. McCue, III, University of Virginia Hospital, Charlottesville VA 22903.

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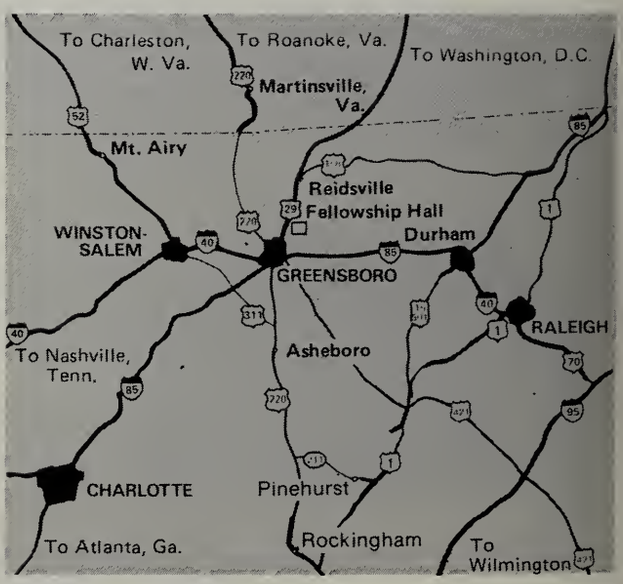




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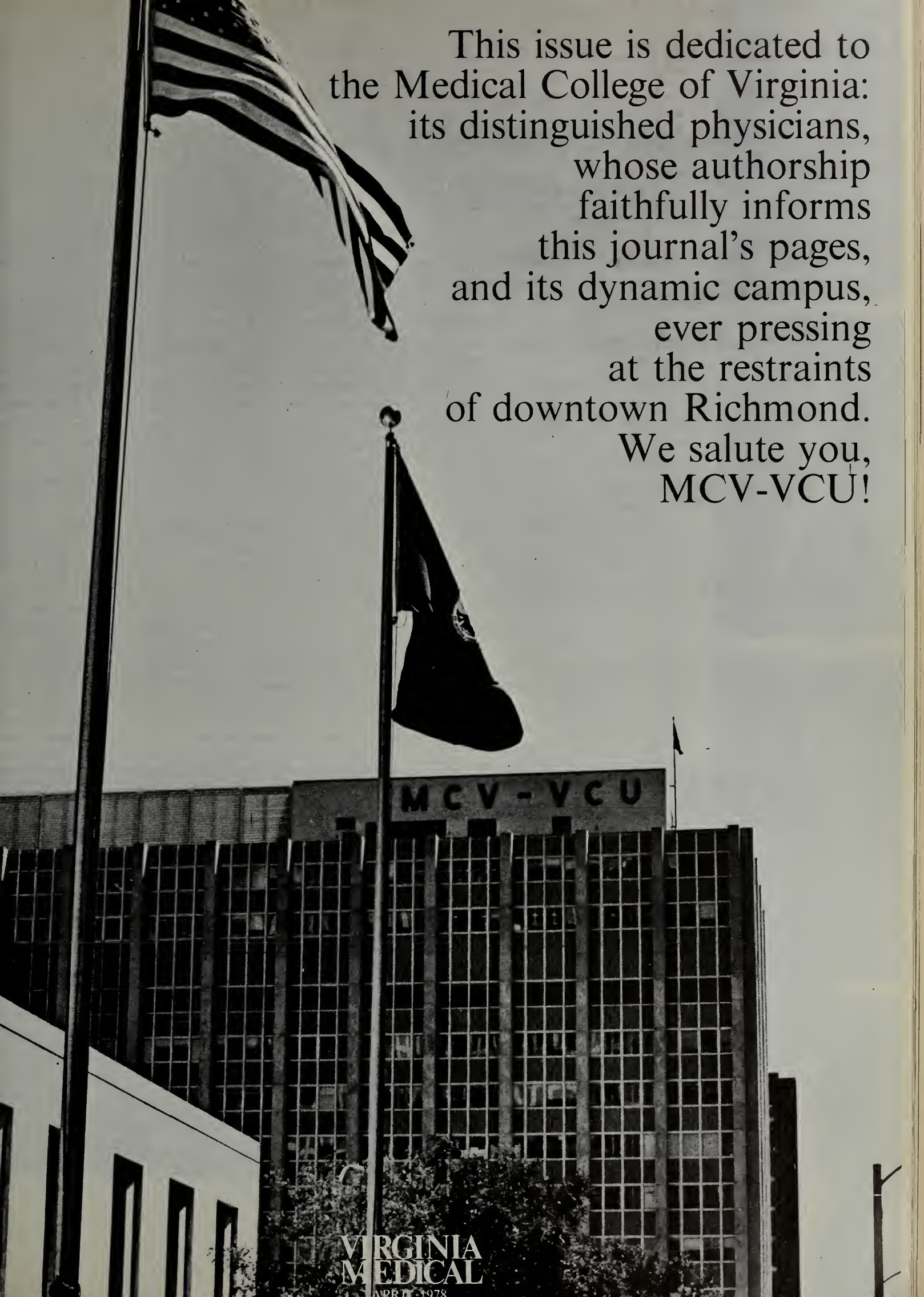
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MCV-VCU!



Dr. Bohannon



Dr. Chamberlayne



Dr. Cullen



MCV: The Doctors

The story of the Medical College of Virginia is, of course, the story of doctors.

Seminal vision was provided by the four Richmond physicians at the left; from top, they are Dr. Richard Lafon Bohannon, Dr. Lewis Webb Chamberlayne, and Dr. John Cullen, and Dr. Augustus Lockman Warner. These doctors had watched, in 1824, the founding of the University of Virginia School of Medicine at Charlottesville, and they wanted a medical school for Richmond. But a parent institution was needed, and Richmond held none. To Farmville, Virginia, they went, and there persistently petitioned the trustees of Hampden-Sydney College to sponsor a medical school in Richmond. Finally their appeal was granted, and the school opened its first term on November 5, 1838. The four founding physicians were the first faculty appointments; Dr. Warner was the first dean. Officially the school was the Medical Department of Hampden-Sydney College, but the first catalogue called it the "Medical College." That name took hold; and when, in 1854, the school's doctors took angry issue with the Hampden-Sydney trustees, failure to follow their wishes in a faculty appointment and chartered the school as an independent institution, they named it the Medical College of Virginia.

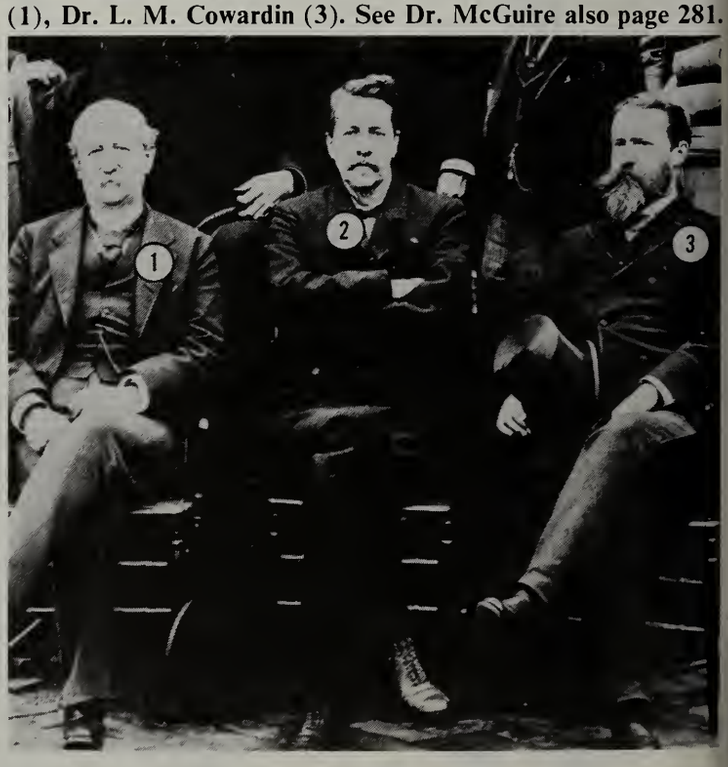
Finances proved a problem for the independent College, and the faculty asked the State of Virginia for help. It was given, but at a price: an Act of the Assembly in 1860 appropriated $30,000 for the school's first hospital building in exchange for a deed to all College property. From that time on the school was under state ownership and control.

Late in the same century the College experienced another decisive rift; it was led by the commanding figure at center below, Dr. Hunter Holmes McGuire. Dr. McGuire differed with some of the College's policies, especially its curriculum of only two years. Boldly resolving his dissatisfactions, he founded a second medical school. It was called the University College of Medicine, its buildings were in the same area as the first school, and it offered a three-year medical curriculum.

Doctor McGuire's University College dynamically rivalled the original school for 20 years. Then, in 1913, bowing to the Flexner Report's call for fewer, stronger medical schools, the two Colleges joined as one, under the name of the older, state-supported Medical College of Virginia.

So it continued, until, in 1963, Virginia's legislators made it the centerpiece of the new Virginia Commonwealth University. The VCU liberal arts campus is a mile away across the city, however, and MCV-VCU retains the independent spirit that activates its heritage.

Dr. Hunter Holmes McGuire (2) with Dr. Thomas J. Moore (1), Dr. L. M. Cowardin (3). See Dr. McGuire also page 281.



At a meeting of department chairmen, leaders of the Medical College of Virginia today are shown below in a photograph taken earlier this year.

Seated, left to right, are Dr. C. Paul Boyan, chairman, anesthesiology; Dr. M. Pinson Neal, Jr., provost of the College; Dr. Reuben B. Young, executive associate dean and director of medical staff services; Dr. Jesse L. Steinfeld, dean of the College; and Dr. Mary Ann Frable, acting chairman, otolaryngology.

Standing in the front row, left to right, are Mr. Robert C. Kidd II, executive director, MCV Hospitals; Dr. Lazar J. Greenfield, chairman, surgery; Dr. Harold M. Maurer, chairman, pediatrics; Dr. W. Kenneth Blaylock, chairman, dermatology; Dr. George P. Vennart, chairman, pathology; Dr. Leo J. Dunn, chairman, obstetrics and gynecology; and Dr. Andrew P. Ferry, chairman, opthalmology.

Standing at rear, left to right, are Dr. Ernest R. Griffith, chairman, rehabilitation medicine; Dr. Frederick J. Spencer, chairman, preventive medicine; Dr. John R. Jones, associate dean for planning and evaluation; Dr. Fitzhugh Mayo, chairman, family practice; Dr. Robert O. Friedel, chairman, psychiatry; Dr. Michael C. Beachley, chairman, radiology; and Dr. Harold J. Fallon, chairman, medicine. Two department chairmen were not present for this meeting: Dr. Cary G. Suter, neurology, and Dr. David K. Wiecking, legal medicine.

The first MCV faculty, in 1838, totalled six. Today the full-time faculty includes more than 200 physicians.



MCV: The Classrooms

The first students of the Medical Department of Hampden-Sydney College, the original "Medical College," were taught in the building below, formerly a hotel, in downtown Richmond. The structure no longer exists.



The remarkable "Egyptian Building" (below) was the Medical College's first academic hall built for the purpose. It was completed in 1845; this photograph is circa 1867. The structure's curious architectural allusion may well have contributed to its preservation; the College's first hospital (far right), for instance, has long since vanished, but the Egyptian Building, impeccably restored in recent years, lives on with distinction.



Instruction for MCV-VCU students today centers about Sanger Hall, the 12-story building shown here. It honors William T. Sanger, under whose presidency 1925 to 1956 the College grew phenomenally in faculty and physical plant.



Photograph by Bill VanPelt

MCV: The Hospitals

The drawing at right is of the Medical College of Virginia's first hospital. It was adjacent to the Egyptian Building (see page 274) and the bed capacity was eighty. The dean's report proudly noted it was "heated by means of furnaces."



The University College of Medicine's Virginia Hospital is shown at the right. Built in 1893 as the residence of Dr. John Brockenbrough, the building was razed in 1956.



Below is the Memorial Hospital, built in 1903 and still used by MCV. It was a gift from its private owners in 1913 on condition the two medical schools consolidate.

A new hospital is now being built in the heart of the MCV-VCU campus. (The excavation site may be seen in the aerial photograph on page 324.) To be completed early in 1981, the hospital will have 537 beds. The cost of the first MCV Hospital (upper right) was $22,336. The price tag for the new one is $110 million.



Below is the enormous Medical College of Virginia Hospital, completed in 1941. It has 600 beds, is 18 stories high, and was the first air-conditioned hospital in the South. Four wings radiate from its central core. Admissions in 1977 totalled 27,500.



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In Five Generations of Doctors, Clues to a Rewarding Practice

Hunter H. McGuire, Jr., MD, *Richmond, Virginia*

"What I will tell you is based on twelve McGuire doctors, plus a couple of grandfathers on my mother's side. Their collective and continuous practice began in 1801." The author is speaking to the MCV graduating class.

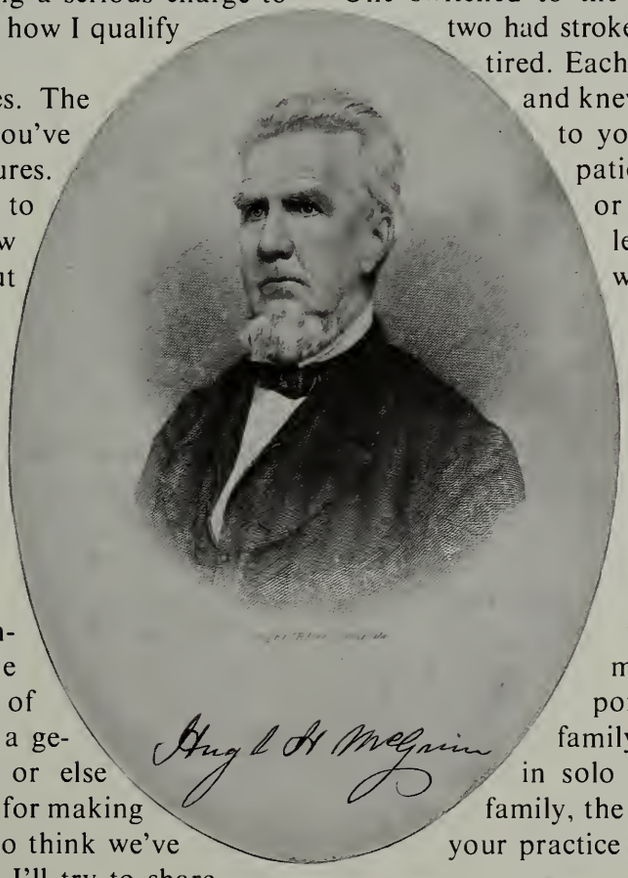
FOR ten years at senior take-offs I have made fun of commencement speakers. Today for the first time I have the honor of giving a serious charge to new physicians. I've wondered how I qualify for this privilege.

I have had three specialties. The first is surgery, but I'm sure you've had enough of surgical lectures. The second is as a counselor to students, and I'm sure by now you know much more about students than I do. My third special experience, which I share only with my brother, Lockhart, is being the fifth generation of physicians in the same family. It is from this odd and egocentric vantage point that I will speak to you this afternoon.

Having five consecutive generations of a family go into the same profession indicates one of two things. Either we've had a genetic defect in imagination, or else we've found some special clues for making the work rewarding. I prefer to think we've found some special clues, and I'll try to share them with you.

What I will tell you is based on twelve McGuire doctors, plus a couple of grandfathers on my mother's side. Their collective and continuous practice began in 1801. The first thing I find remarkable about them is that each practiced well or not at all. One switched to the ministry, another to farming, two had strokes on the job, and the others retired. Each knew his best, knew his limits and knew when to quit. So my first hint to you is this: practice medicine as patients expect it—at its very best or not at all. When you finish, leave knowing that all you did was good. I pray that every one of you will do only good for many, many years.

Another peculiar fact about the physicians in my family is that they were such a close-knit clan that for several generations they married their own cousins or in-laws. The lesson I infer is that to succeed happily in such demanding work, you need support from home. With strong family support you can be excellent in solo practice, but without a close family, the entire staff of NIH can't make your practice good. So my second hint is to



This photograph is of the first Doctor McGuire on the paternal side of the author's family: Dr. Hugh Holmes McGuire, Winchester, Virginia (1801-1873), who was the author's great-great-grandfather.

keep close ties to all your relatives, both living and departed. Solutions to the toughest problems and consolation for inevitable failures must come from home—from the homes you grew up in and the homes you will create. Cultivate your homes for the sake of your families, yourselves, and your patients.

That is my second hint, and here is a corollary to it. Creating a happy family can be a strain in itself, and to do this plus practice excellent medicine requires more than human help. For that extra strength you must keep in close touch with your God. Whether you perceive God as an abstract principle or as a man or a cross may not matter. What does matter is that you actively wonder about creation, about the genesis of life, the improbability of man, the miracle of love and a life hereafter. You can't wonder about such things without feeling religious reverence, and religion is essential to a happy practice of medicine.

A third peculiar fact about my medical ancestors is that all were simple, common people. For the first, humility was inevitable; his skills were primitive, earned little pay and no prestige. The next three were more scientific, but easily humbled by their bad results. One found his Philadelphia training didn't work and quit. Another persevered with help from a more substantial citizen, his local blacksmith; together they designed scissors which ultimately cured a cataract after first putting out a peck of eyes. The next learned humility beside dying soldiers of his beaten army. The next layed railroad ties for several years to earn a year's tuition for medical school. The next had Pott's disease, couldn't attend any school until he was 15, and when he finished medical school his first job was as hospital housekeeper. The last spent his prime years recovering from TB and myocardial infarctions. All these doctors knew the pains, the burdens, and the nobility of their patients. They learned to revere the men and women they served.

You and I have been spoiled by public admiration and high pay. Most of us expect to be addressed, paid and honored as an elite class. But any idea that doctors are elite is a foolish fad. I may have been spoiled, but I have also battled storms with common seamen and harvested grain with common fieldhands. I have learned that these people are just as good as professors of medicine—even as good professors of surgery. At least one nation requires reverence for common folk in its medical curricula; Chinese medical students are required to spend every other year working in a factory or on a farm. Happily, in America this lesson is voluntary, but I hope each of you will voluntarily select activities which keep you in touch with common people—which promote sincere reverence for even your poorest, least educated patient. For happiness and success in medicine, that is my next to last clue.

The final clue to my family's addiction to medicine is that the last 175 years have been an era of exuberant explosion in medical science. My first physician ancestor had no effective medicine to prescribe except for opium; he could only describe what he heard, saw and felt, predict its outcome, and relieve its pain. His successors thrilled to discoveries of the stethoscope and microscope, of atoms and electricity, of anesthesia, antisepsis, and antibiotics. It is no wonder that children sensed these thrills and followed their fathers into medicine. I recall my father's elation at saving lives with sulfanilamide and later with penicillin in 1000-unit doses. The appeal of our profession was then truly compelling. And the essence of its appeal was science.

Now, how appealing is medicine today, and will it appeal to your children? Our latest accounting is not a happy one. Our promises have been over-sold, our classes over-populated, our practices over-regulated, and our services over-priced. Congress is promoting physician substitutes to render cheaper care, while we physicians are buying expensive machines to replace our ears and our hands. Our share of public trust and public money is dwindling. Soon no one will be left to love us except our drug and tool manufacturers, who appear to have bought our minds and souls.

What has happened is that politics and commerce have blurred medicine's vision of science. We have been deluded into equating science with impersonal novelties, with computers, scans, ultrasound and NIH contracts. We have almost forgotten that true medical science is observing human nature, defining flaws, predicting outcomes with and without treatment, offering people safe experiments, and proving hypotheses by closely observing our patients. In pure science there is no gimmickery or phoney "professionalism." Pure medical science is ultimately humane and personal, and its principles are unchanging. Today medicine may seem swamped in a sea of technology, commerce, and politics, but our future is great.

I for one am convinced that our whole creation, preservation, and all the blessings of our lives are guided by a special providence or divine plan which moves us to a better future. And I am sure the future for you and your followers in medicine will be still greater than our past if you can use the clues I have given you. In summary they are: devotion to excellence only, reverence for family and religion, reverence for your patients, and strict discipline to the pure scientific method.

I have talked enough about medicine. In closing let me say a word about you. While working with stu-



Two generations of McGuire doctors appear in this operating room scene photographed in the late 1800's. They are Dr. Hunter Holmes McGuire (far left), who is instructing his son, Dr. Stuart McGuire (next left with back to camera). Dr. Hunter Holmes McGuire, the author's grandfather, played a key role in the growth of the Medical College of Virginia (see page 272). Dr. Stuart McGuire was, from 1913 to 1925, successively dean and president of the College. Both father and son were Presidents of The Medical Society of Virginia.

dents at the Medical College of Virginia I have seen over 1,000 men and women become doctors. I have tried to know each of them honestly and well. When May arrives each year, I find myself intensely proud of our graduates. And as hoods are placed and hands are shaken, I always get a special thrill and literally shed special tears of joy for certain students whom I know have been extra generous and made extra sacrifices for their families, classmates, teachers, and patients.

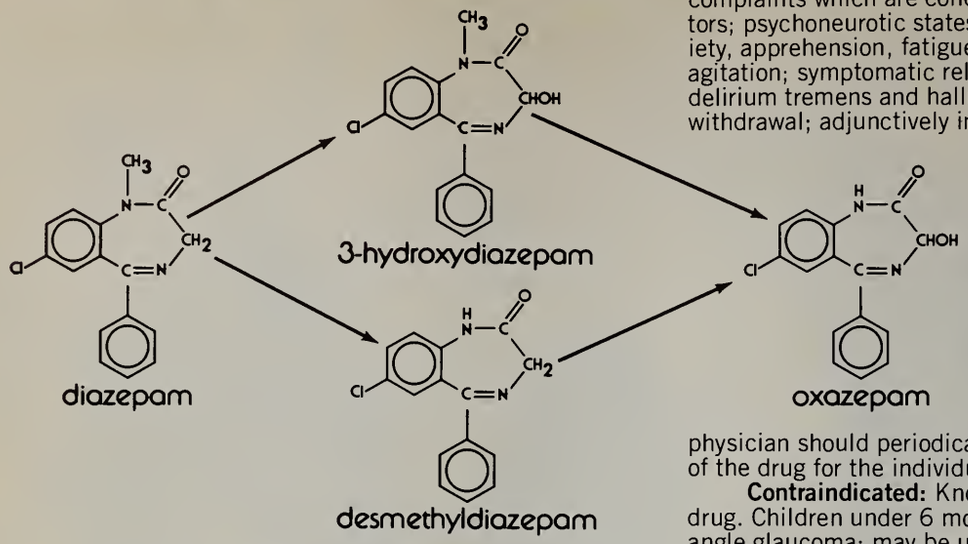
Next month you will each begin the last stage of your formal education. At various times between two and seven years from now, each of you will graduate again. The next time there will be no robes, parades, or music, but for each a quiet, private event. That private event, like the birth of a child, will be the most important moment in your professional lives. I charge you now to prepare for it, to nurture the clues I and many wiser teachers have given you, so that whenever that last commencement occurs, not just a few but every one of you will command tears of joy from your families, your teachers and from me.

Congratulations. May God bless medicine through every one of you.

The text here presented was the charge delivered on May 17, 1977, to the graduating class of the Medical College of Virginia.

Address correspondence to Dr. McGuire at Surgical Services (112), Veterans Administration Hospital, Richmond VA 23249.

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Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Wordsworth

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Duodenal Ulcer Disease: A Fresh Appraisal

L. Gregg Halloran, MD, Richard M. Nisman, MD, and Z. Reno Vlahcevic, MD, *Richmond, Virginia*

A mysterious decline in the incidence of duodenal ulcer is observed by the authors, who present recent advances in knowledge about this disease: multiple physiologic defects have been found, new drug and diet therapies have been defined, and a new operative procedure has been introduced.

IN RECENT years, significant progress has been made in our knowledge and understanding of duodenal ulcer disease. Modern fiberoptic endoscopy has contributed greatly to an objective reappraisal of the natural history of peptic ulcer and to validation of the efficacy of medical and surgical therapy. New concepts in drug and operative therapy have been recently introduced, "the old" has been re-evaluated and newer, perhaps more efficacious, agents are under laboratory development. We have come closer than ever but have not yet solved the riddle of the pathogenesis of peptic ulcer, while throughout the Western world a mysterious decline in incidence of duodenal ulceration is underway. A fresh look at what's been happening to duodenal ulcer seems warranted.

From the Departments of Surgery (Dr. Halloran) and Medicine (Drs. Nisman and Vlahcevic), the Medical College of Virginia, Richmond. Address correspondence to Dr. Halloran at Box 167, MCV Station, Richmond VA 23298.

This work is based on a Surgical Grand Rounds presented by Drs. Halloran and Vlahcevic on October 8, 1977.

Submitted 10-18-77.

Perforation of duodenal ulcer was mentioned in the 18th century to distinguish this rare event in man from poisoning, a more common lethal event in that era. Pathological descriptions of duodenal ulcer began to appear in the latter half of the 19th century, but no true appraisal of the incidence and prevalence of duodenal ulcer was possible until the 1940's, and then only in a few cities, in a few countries.[1] In 1946 Ivy[2] mathematically projected that one male in ten would harbor a duodenal ulcer by age 65, and this oft quoted projection has become axiomatic for the United States population.

In Western nations, duodenal ulcer disease appears to have reached a peak incidence close to the end of the first half of this century. Many authors have since noted a decline in the incidence of duodenal ulceration.[1,3-5] An example of this decline is shown in Table 1 from unpublished data obtained from an ongoing VA Cooperative Study of Surgery for Duodenal Ulcer involving 12 acute-care hospitals.[6] The decline in the rate at which the diagnosis of duodenal ulcer was made in these hospitals between the years 1966 and 1976 is remarkable. Calculation shows the annual rate of decline in diagnosis to be over 13%. It could be argued that this sharp decline in the "chart diagnosis" of duodenal ulcer merely represents mod-

ern demands for objective rather than clinical evidence of disease. Although valid to a degree, this criticism does not explain the significant decrease in duodenal ulcer perforation during the same time period. In the absence of any significant change in medical therapy of peptic ulcer during the decade under study, a constant percentage of active ulcers may be assumed to perforate. Using perforation as an indicator of the true prevalence of duodenal ulcer, the annual rate of decline is over 9%. Should this latter rate be correct and persist through the remainder of this century, and if the 1976 data in this admittedly special, predominately male, hospital population accurately reflect the prevalence of duodenal ulcer, the diagnosis of duodenal ulcer will be made in one of 10,000 hospital admissions by the year 2018.[6]

The dramatic decrease in the incidence of duodenal ulceration which has been underway since about 1955 is puzzling and raises serious questions about the appropriateness of genetic, social or psychological theories of its pathogenesis. Regardless, duodenal ulcer remains a common and vexing problem and the subject of intensive investigative effort.

Pathophysiology

In recent years a great deal of progress has been made in our understanding of the pathogenesis of duodenal ulcer. The presently available evidence indicates that the pathogenesis of duodenal ulcer is in some way related to excessive gastric acid and pepsin secretion combined with an increased rate of their delivery into the duodenum. Although the precise mechanism responsible for abnormal gastric acid secretion in these patients is not known and an integrated hypothesis which takes into account all observations thus far obtained has not been derived, several pertinent facts have emerged.

Parietal Cell Mass. Several years ago Cox[7] reported an approximate two-fold increase in the number of parietal cells (parietal cell mass) in patients with duodenal ulcer. An even higher increase in the parietal cell mass was observed in patients with Zollinger-Ellison syndrome.[8] Maximal gastric acid output (maximal acid secretion after stimulation with pentagastrin or histalog) is increased in patients with duodenal ulcer (mean of 40 mEq/hr vs 20 mEq/hr in normal subjects) and correlates well with the parietal cell mass.[9] Although the mechanism responsible for the observed increase in parietal cell mass in the duodenal ulcer patients is not known, a trophic effect of gastrin and/or increased "vagal tone" has been most frequently implicated. It should be noted that fasting serum gastrin concentrations do not differ in normal and duodenal ulcer patients.[10]

Table 1. Incidence of Duodenal Ulcer and Perforation from 12 VA Hospitals*.

	1966	1976
Total Admissions	90,720	143,561
Diagnosis of Duodenal Ulcer	2,525	935
Perforated Duodenal Ulcer	85	50

* VA Cooperative Study

Pepsin Secretion. Pepsin, in the form of pepsinogen, is also secreted excessively in these patients and can be detected in the blood as pepsinogen. However, there is a significant overlap between normal subjects and duodenal ulcer patients regarding both pepsin and gastric acid secretion. Consequently, neither gastric analysis nor serum pepsinogen concentration can be reliably used to identify patients with duodenal ulcer disease although the latter has been shown to have predictive value.[5,11]

Parietal Cell Sensitivity. Isenberg et al[12] have recently demonstrated that administration of the same dose of pentagastrin to normal subjects and to duodenal ulcer patients resulted in a significantly higher increase of gastric acid secretion in the ulcer patients. This observation suggests that duodenal ulcer patients may be "supersensitive" to endogenous gastrin stimulation resulting in hypersecretion of acid in response to normal levels of circulating hormone.

Gastrin Release. Normally, release of gastrin from the gastric antrum is almost completely inhibited at an intragastric pH of 2.5. In contrast, gastrin release in duodenal ulcer patients is only moderately inhibited at this pH, suggesting an abnormal feedback control of gastrin secretion.[13] Thus, "inappropriate" release of gastrin at a low pH may play an important role in the pathogenesis of duodenal ulcer. In addition, while a protein meal is normally a stimulus to gastrin release, this effect may be significantly accentulated in duodenal ulcer patients.[10,14]

Gastric Emptying. Carefully designed studies by Fordtran et al[15] have shown that the rate of postprandial gastric acid secretion in duodenal ulcer patients was twice the rate of control subjects. In addition, two hours after the test meal the buffer content of the stomach in the duodenal ulcer patients was only about one-half that of the control subjects. Cano and Isenberg[16] observed that duodenal ulcer patients have a greatly increased acid load in the duodenum one hour after a test meal. The combination of excessive acid secretion in response to a meal and more rapid emptying of gastric contents into the duodenum may also play an important role in the pathogenesis of duodenal ulcer formation.

Duodenal Defense. A decrease in duodenal mucosal resistance to gastric acid has been thought to play a

role in ulcer formation. Some of the factors possibly responsible for this local defect are inadequate pancreatic bicarbonate secretion, a defect in mucus production, a duodenal inflammatory process, and abnormal blood flow. However, none of these postulated defects have been adequately studied.[7]

Research in recent years has therefore identified several important differences in gastric physiology between duodenal ulcer patients and normal controls. The duodenum of the ulcer patient is exposed to more acid than that of the normal subject because of increased numbers of parietal cells, increased sensitivity of these cells to gastrin, impaired feedback control of gastrin release and more rapid emptying of the stomach.

Medical Therapy

In view of the apparent central role of gastric acid in duodenal ulceration, medical therapy has been directed toward reduction or buffering of gastric acid secretion. Recently, several important studies were published which introduced a "new look" at the long established peptic ulcer regimens. A potent H_2-receptor blocker, cimetidine (Tagmet), was introduced into the United States market. In addition, several other potentially useful compounds are in various stages of testing. A systematic review of this new information seems appropriate at this time.

Diet. Strict adherence to a frequent feeding diet (six meals) was considered for years to be an important part of duodenal ulcer therapy. Actually, there is no good evidence to support the contention that strict adherence to diet hastens duodenal ulcer healing or prevents ulcer recurrence. On the contrary, presently available data suggest that an increase in gastric acid secretion after meals exists in duodenal ulcer patients.[15] Hourly milk or "six feeding" diets tend to maintain higher gastric acidity. Since it does not appear that a gastric "buffering effect" is achieved by frequent feedings, the current diet recommendation is that patients with duodenal ulcer should consume three meals per day and, contrary to previous practice, avoid late night snacks.[18]

Anticholinergics. It's now well established that anticholinergics can suppress both basal and stimulated gastric acid secretion by 40-50%. This effect however, can only be achieved by drug doses which usually cause undesirable side effects. In general, the design of clinical studies evaluating the clinical effectiveness of anticholinergics in duodenal ulcer healing have been less than ideal, and the results have been contradictory.[19] No good data are available to assess their ability to prevent recurrence of duodenal ulcer. Consequently, anticholinergic agents should only be employed as adjuvant therapy in patients with persistent pain, particularly when nocturnal and unresponsive to other therapy.

Antacids. Antacids have been and still are the mainstay of duodenal ulcer therapy. Their widespread use was prompted by the belief in their ability to buffer gastric acidity and relieve duodenal ulcer pain. It was generally assumed that strict adherence to antacid therapy did not hasten ulcer healing. It is of interest that in this era of scientific reasoning and demands for documentation, these "beliefs" were perpetuated without adequate evidence.

The best systematic evaluation of the buffering effectiveness of antacids was conducted by Fordtran and Collyns[20] who demonstrated that, when administered in the fasting state, antacids were rapidly (20 min) emptied from the stomach. However, antacids administered one hour after the meal depressed gastric acidity for three to four hours. Furthermore, Fordtran et al[21] tested the potency of a variety of antacids in *in vitro* and *in vivo* experiments. They concluded that the effectiveness of antacids depends upon: a) the type of antacid, since the buffering capacity of the manufactured antacids varies widely (Table 2); b) the dose of antacid; c) its timing with relation to meals; d) the patient's gastric secretory status and his individual gastric response to a meal; e) and the rate of gastric emptying.

Table 2. Buffering Capacity, Cost and Sodium Content of Commonly Used Liquid Antacids.

Antacids	Potency[1] (mEq/30ml)	Cost[2] ($/360ml)	Sodium Content[3] (mg/30ml)
Mylanta II	124	2.40	24–60
Titralac	116	1.80	66
Maalox	77	1.66	15
Di-Gel	74	—	51
Mylanta	71	1.60	23
Riopan	66	1.49	4
Amphojel	58	1.83	41
Gelusil	40	1.53	48
Phosphaljel	13	1.65	75

1. *In vitro* neutralizing capacity, from Fordtran et al.[21]
2. From *American Druggist Blue Book*, May 1977[24].
3. From *Handbook of Non-Prescription Drugs*, 5th Edition, 1977[25].

In order to determine the effectiveness of antacids in promoting duodenal ulcer healing, Peterson et al[22] carried out a double-blind, controlled trial in which the effect of a large daily dose ($\simeq$1000mEq) of antacid taken 1 and 3 hours after each meal and at bedtime was compared with placebo. The antacid was aluminum hydroxide, magnesium hydrosice, and simethicone (Mylanta II). This study showed the ant-

acid regimen to be more effective than placebo in healing duodenal ulcer. Thus for the first time antacids were shown to promote ulcer healing, but the doses were large. No data is available regarding the ability of antacids to prevent duodenal ulcer recurrence. The effect of antacid on the relief of peptic ulcer symptoms was studied by Sturdevant et al.[23] Surprisingly, in this well-controlled study placebo was as effective as antacids in relieving duodenal ulcer pain. In these two studies the presence or absence of symptoms correlated poorly with duodenal ulcer healing. These recently obtained data challenge previous beliefs that antacids do not heal ulcers but only relieve symptoms.

H_2-receptor antagonists. Histamine, acting through specific surface receptors not blocked by conventional antihistaminics, is a powerful gastric acid secretagogue. The recent discovery of a new class of drugs capable of blocking these histamine receptors (termed H_2-receptors) now permits inhibition of acid secretion produced by food, histamine, pentagastrin, insulin-induced hypoglycemia and caffeine.[26–33]

Cimetidine, the newest of the H_2-receptor blocking agents, has been tested in recent clinical trials to determine its effectiveness on duodenal ulcer healing and relief of symptoms. European trials[29,34,35] showed a clear superiority for cimetidine over placebo in duodenal ulcer healing, prompting similar studies in the United States. A multi-center trial was recently completed in this country comparing cimetidine with placebo for ulcer healing and relief of symptoms.[36] Both groups were allowed antacids *ad libitum*. Ulcer healing proven by endoscopy was significantly higher in the cimetidine group after two weeks of therapy, but this difference disappeared at four and six weeks, although "trends" favored the cimetidine group. Cimetidine was more effective than placebo in symptom relief. These and other findings resulted in FDA approval of cimetidine for short-term therapy of duodenal ulcer (up to eight weeks) and marketing was begun in the US in August of 1977. The drug has also been proven effective in the treatment of pathological hypersecretory conditions such as Zollinger-Ellison syndrome[37,38]and systemic mastocytosis,[38] and is, therefore, approved for use in these uncommon diseases associated with duodenal ulceration.

The recurrence rate of duodenal ulcer after cessation of any therapy including cimetidine is high, reaching 80% six months following discontinuance of therapy in one study.[38] Observations in a small number of patients from Scotland and Australia suggest that prolonged cimetidine use might reduce duodenal ulcer recurrence.[38] Moreover, the drug dose required to prevent recurrence was much less than that necessary to heal active ulceration. It should be cautioned that larger and better controlled studies are necessary to establish the role and safety of the prolonged use of cimetidine on duodenal ulcer recurrence rates. Cimetidine is presently being studied in the US to determine its role in altering the natural history of this chronic, recurring disease. Should it prove to be both safe and effective, the histamine H_2-receptor antagonists will surely have a profound impact on the management of duodenal ulcer disease.

Other Drugs. Carbenoxolone, an extract of licorice, is available in Europe for the treatment of duodenal ulcer. The mechanism of action is uncertain, though an increase in duodenal mucus production as well as a prolonged mucosal cell survival time have been suggested. Results of previous studies have been conflicting. A recent prospective double-blind study utilizing fiberoptic endoscopy demonstrated ulcer healing efficacy for carbenoxolone after six weeks of therapy.[39] Untoward side effects include fluid retention, elevation of blood pressure, and hypokalemia. The drug has not been approved for general use in the US.

A number of other agents with therapeutic potential are now in various stages of testing.[14] Most interesting of this group are the methyl analogues of the E_2-prostaglandins. When given orally these compounds have been shown to significantly inhibit basal, stimulated and meal induced gastric acid secretion in man.[40,41] Preliminary evidence suggests that these chemically modified prostaglandins suppress gastric acid secretion by inhibiting antral gastrin release. Few side effects have been encountered with these compounds. Their benign nature coupled with their ability to profoundly inhibit gastric acid secretion may enable these drugs to be useful in the medical therapy of duodenal ulcer.

Radiation. Gastric irradiation to inhibit acid secretion and permit ulcer healing has been available for many years.[42] A recent study[43] using 1500-2000 rads indicates that it is an effective and safe mode of treatment for older patients. It should be reserved for patients with complicated ulcer disease who are poor surgical risks. It has the potential to maintain remissions for relatively long periods of time (up to 14 years);[43] however, cimetidine may ultimately prove to be a better method of achieving this effect.

In view of the available data and the changing concepts of duodenal ulcer disease, the following therapeutic regimen is suggested for the medical management of the active duodenal ulcer:

1. A regular, three meal-a-day diet with exclusion of foods which aggravate symptoms is recommended.
2. Avoidance of coffee as well as mucosal "irritants" such as aspirin and alcohol is desirable.

3. Antacids: Since most duodenal ulcer patients are "hypersecretors" (maximal acid output >25mEq/hr), large doses of antacids are necessary to achieve adequate neutralization. The recommended dose of 120-150mEq should be taken 1 and 3 hours after meals and at bedtime[22] (e.g., 30 ml Mylanta II would equal one dose). If diarrhea develops, another antacid can be substituted while maintaining the necessary buffering capacity (Table 2).

   Some patients may require less antacid dosage due to a lower gastric secretory capacity; however the effect of a regimen with lower buffering capacity on ulcer healing has not been proven effective.

   The duration of therapy should probably not exceed one month in most cases since most ulcers are healed by that time.[22] Cost and sodium content may be factors in the choice of the antacid (Table 2).
4. Anticholinergics: These drugs should be used only as adjunctive therapy and then, only for persistent, especially nocturnal, pain.[19]
5. Cimetidine: Because this drug is approved only for short-term therapy (8 weeks) and its overall safety is not fully established, it is probably wise at this time to reserve its use for those cases of duodenal ulcer which have not responded to appropriate antacid therapy, for pathologic hypersecretory conditions, and for patients who are poor operative risks.

Surgical Treatment

The early development of operative procedures specifically intended for the management of duodenal ulcer disease was based upon operations used for the treatment of gastric tumors and benign gastric ulceration. These early operations, such as distal hemigastrectomy and gastro-jejunostomy for duodenal ulcer, reflected a near total void in knowledge of gastric physiology and a primitive interpretation of the pathogenesis of duodenal ulcer.[44] It is no surprise that both morbidity and ulcer recurrence rates were high following these operations.

Vagotomy, the keystone of modern duodenal ulcer surgery, was first added to resection of the distal stomach by Latarjet in 1922. He published his work only to have it ignored and forgotten until 1943, when Dragstedt and Owens inaugurated the "physiological era" of surgery for duodenal ulcer by reporting the results of transthoracic truncal vagotomy alone for the control of duodenal ulceration.[45] The rationale for vagotomy is its effect on gastric acid

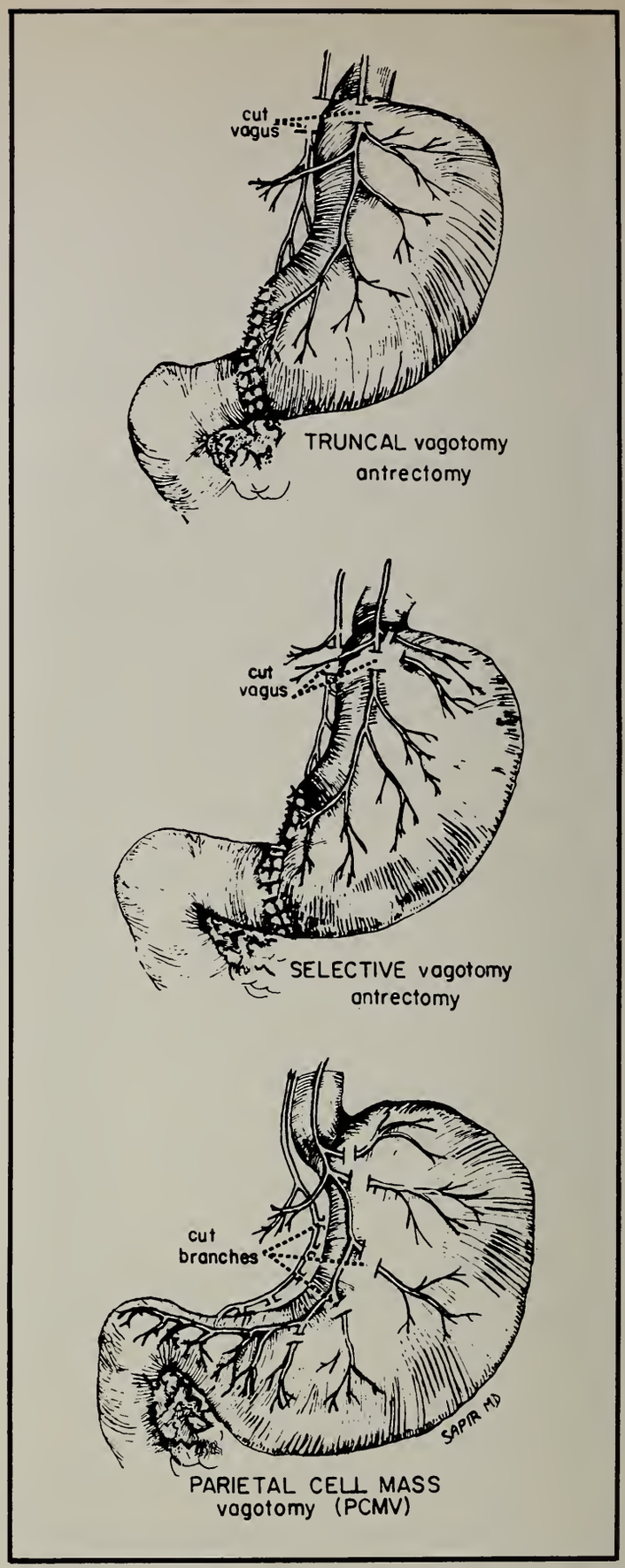


Fig. 1. Diagrammatic description of the three types of vagotomy: truncal or total subdiaphragmatic vagotomy; selective or total gastric vagotomy (both of these types require distal resection or drainage procedure); and parietal cell vagotomy or vagotomy of the acid secreting portion of the stomach (does not require additional procedure).

Table 3. Percent of Patients with Undesirable Side Effects Five Years Following Operation*.

	Vagotomy/ Drainage	Vagotomy/ Antrectomy	Vagotomy/ Hemigas-trectomy	Hemigas-trectomy
Dumping	18%	27%	31%	35%
Diarrhea	21%	22%	22%	17%
Early Satiety	12%	17%	19%	23%
Bilious Vomiting	2%	5%	3%	5%
Hypoglycemic Syndrome	12%	17%	15%	12%
Epigastric Pain	30%	30%	27%	24%
Weight Loss	43%	47%	44%	41%
Restricted Diet	38%	40%	35%	44%

* VA Cooperative Study of Surgery for Duodenal Ulcer; modified from Postlethwait RW[53].

secretion. Truncal vagotomy lowers basal gastric acid secretion by 70-80% and reduces the peak acid response to histamine or pentagastrin by 50-70%.[46,47] Thus, the cephalic phase of gastric acid secretion is almost abolished and the acid secretory cells are much less responsive to potent secretagogues.

Not only is the gastric secretory response of the stomach inhibited by truncal vagotomy but so is gastric motility and relaxation of the pyloric muscle. A concomitant gastric drainage procedure is therefore necessary to avoid gastric stasis. There are currently three popular types of vagotomy; truncal, selective and parietal cell or highly selective vagotomy, shown diagramatically in Figure 1. More than a quarter century of experience with truncal vagotomy and various drainage procedures for management of duodenal ulcer is available for review and has been summarized by Schrock[47] and Harrington, Sawyers, and Scott.[48] The combination of truncal vagotomy and resection of the gastrin-producing antrum has been proven in both prospective and retrospective studies to be the most effective operation for control of duodenal ulcer in most patients. It is safe, with mortality rates ranging from 0.3-2.0% and it is effective, with an ulcer recurrence rate of less than 2% in most series. Every available study of operations for duodenal ulcer disease comparing vagotomy and antrectomy with vagotomy and any other drainage procedure has shown the former to be superior for ulcer control with no significant difference in mortality, morbidity or noxious side effects.[47-53]

In addition to total gastric vagal denervation, both truncal and selective vagotomy have in common the obligatory destruction, resection or bypass of the pyloric mechanism. Each of these maneuvers produces noxious side effects, the most serious of which are listed in Table 3 from the VA Cooperative Study of Surgery for Duodenal Ulcer.[53] Although the frequency of these undesirable symptoms after operation is alarming, it should be emphasized that their intensity is usually mild to moderate. Thus, based upon presently available evidence, truncal vagotomy and antrectomy is presently the most acceptable first-choice operation for the control of duodenal ulcer.

In spite of the protection from ulceration provided by truncal or selective vagotomy and antrectomy or pyloroplasty, investigators still searched for better surgical therapy because postgastrectomy sequelae disabled some patients, were unpredictable in occurrence, and, when severe, defied simple treatment. The development of the newest operation is discussed in detail below because it is the newest and least familiar. We also believe that this approach is the most physiologic and probably will be the first choice operation for duodenal ulcer in the future.

Parietal Cell Vagotomy. Lester Dragstedt's concept of vagotomy alone for the treatment of duodenal ulceration was thwarted by the production of gastric stasis in 10% of patients so treated. Griffith and Harkins provided the foundation for the most recent innovation in duodenal ulcer surgery by their experimental work with "partial gastric vagotomy" reported in 1957.[54] They devised and examined the effects of both selective and parietal cell vagotomy in the dog. The significant findings were that the canine stomach would empty satisfactorily following vagal denervation of the parietal cell containing portion of the stomach while the cephalic phase of acid secretion was eliminated.

This important experimental observation did not gain a foothold in the United States because American surgeons were still preoccupied with establishing *any* role for vagotomy in the therapy of duodenal ulcer. Thus, the operation was taken from the laboratory to clinical pilot studies primarily by European surgeons, most notable among whom were David Johnston in England,[55] Eric Andrup in Denmark,[56] and Fritz Holle in Germany.[46] Table 4 shows some representative pilot studies regarding the effectiveness of parietal cell denervation alone in the control of duodenal ulcer. All of these studies showed parietal cell vagotomy to be effective in duodenal ulcer control and to produce minimal noxious side effects.

Table 4. Incidence of Undesirable Symptoms.

	Vagotomy/ Drainage or Resection	Parietal Cell Vagotomy	Normal Controls
Dumping	18–20%	5%	4%
Diarrhea	10–15%	5%	3%
Bilious Vomiting	3– 5%	2%	1%
Epigastric Pain	30%	10%	5%

Table 5 compares the incidence of side effects and recurrent ulceration between vagotomy and drainage or antrectomy and parietal cell vagotomy alone with

Table 5. Results of Parietal Cell Vagotomy Alone: Observation Period 1–6 Years*.

Author	Patients	Recurrence	Dumping	Diarrhea
G. Grassi et al	787	1%	0.4%	0
S. Hedenstedt	465	1%	2%	0
I. Liauag, M. Roland	265	6%	2%	2%
Holst-Christenson et al	160	9%	"none severe"	
T. Kennedy et al	112	6%	7%	2%
J. Miguel	80	6%	5%	10%
Amdrup & Johnston	271	3%	"not stated"	

* Modified from Amdrup E et al[66].

that seen in unoperated controls.[57] Parietal cell vagotomy patients compared favorably to unoperated controls in terms of noxious upper gastrointestinal complaints and are clearly better off as a group than those subjected to truncal vagotomy plus antrectomy or drainage procedures.

Following the encouraging results obtained from these pilot studies, several randomized prospective trials were conducted comparing parietal cell vagotomy with the investigator's usual elective operation for duodenal ulcer. Some of these studies are summarized in Table 6. In every case side effects were lessened by parietal cell vagotomy and in all but one study the ulcer recurrence[58] rate was acceptable. Subsequently Kronborg's group[59] revised their operative technique and reported a much improved outcome compatible with the satisfactory results obtained by others. The importance of meticulous surgical tech-

Table 6. Randomized Trials Comparing Parietal Cell Vagotomy With Other Types of Vagotomy: Observation Period 1–3 Years*.

Author	Operation	No. Patients	Recurrence	Dumping	Diarrhea
Wastel	PCMV	50	6%	6%	6%
	PCMV&D	50	16%	22%	6%
Kronborg	PCMV	50	20%	6%	6%
	SGV&D	50	8%	30%	20%
Kennedy	PCMV	50	2%	8%	4%
	SGV&GJ	50	2%	34%	12%
Jordon	PCMV	27	4%	15%	0
	GV&A	26	10%	60%	8%

PCMV = parietal cell mass vagotomy. D = drainage. SGV = selective gastric vagotomy. GJ = gastrojejunostomy. GV&A = truncal vagotomy and antrectomy.

* Mondified from Amdrup et al[66].

nique has been emphasized by recent studies in both the dog and man. Hallenbeck et al[60] showed a significant difference in postoperative gastric acid secretion, symptoms and ulcer recurrence as a result of a few centimeters difference in the esophageal vagal dissection during operation. Trout et al[61] clearly defined the contribution that these small, inconspicuous, esophageal vagal fibers make to postoperative gastric acid secretion in a canine preparation.

Mortality and morbidity data for parietal cell vagotomy were obtained by David Johnston via questionnaires sent to 33 centers known to be performing this operation. Results from 4,557 operations were reported. There were 12 deaths (0.26%). Seven patients had necrosis of the lesser gastric curvature which resulted in three deaths; 30 patients experienced early gastric stasis requiring reoperation in five, with 29 additional instances of late gastric stasis requiring reoperation.[62] Experienced operators have not reported gastric necrosis following operation.[63] In 1977 Brandborg and his associates[64] reported the effect of parietal cell vagotomy on gastric emptying and serum gastrin concentration in response to food. They showed that parietal cell vagotomy had no significant effect on the gastric emptying rate, whereas emptying was significantly delayed after total gastric denervation and a drainage procedure. Additionally, there was no change in the integrated gastrin output after a test meal in the parietal cell vagotomy patients while it was markedly increased after vagotomy and drainage.

During the first year after parietal cell vagotomy an increase in basal acid output as well as pentagastrin or insulin-stimulated acid secretion has been observed.[65] It should be emphasized that postoperative basal acid secretion rarely exceeds 20% of baseline nor stimulated secretion 50% of baseline. Thus permanent and substantial reductions in gastric acid secretion are achieved by vagal denervation of the parietal cell mass alone and Dragstedt's vision of a safe, effective operation for duodenal ulcer based upon physiologic principles may be realized by this elegantly simple operation.

Summary

There have been remarkable recent advances in knowledge about duodenal ulcer, a disease which may be spontaneously disappearing. Multiple physiologic defects have been found including increased numbers of parietal cells and their increased sensitivity to gastrin, excessive gastrin release after food intake, decreased inhibition of gastrin release by low antral pH, more rapid gastric emptying, and, possibly, impaired duodenal mucosal resistance to acid.

Antacid and diet therapies have been subjected to scientific scrutiny and their respective roles in the

therapy of the duodenal ulcer are now better defined. New drugs have been developed which strongly inhibit gastric acid secretion in man—the recently marketed histamine H_2-receptor antagonist, cimetidine, as well as chemically modified prostaglandins. Clinical trials have shown cimetidine to be effective in healing duodenal ulcers and free of significant side effects with short-term usage. Its role in the prevention of ulcer recurrence is presently being evaluated.

A new operation for duodenal ulcer has been introduced which shows great promise following pilot studies and some randomized trials. Only the parietal cell containing portion of the stomach is denervated. Basal and stimulated gastric acid secretion are markedly inhibited while gastric motility is unimpaired. This operation thus eliminates the need for a drainage procedure or distal antral resection and decreases the incidence and severity of undesirable side effects associated with earlier operations for duodenal ulcer.

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Allpurinol Hypersensitivity Syndrome: Effects and Treatment

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There have been recent reports of a characteristic hypersensitivity syndrome associated with the use of allopurinol. The authors describe this syndrome, emphasizing predisposing factors and clinical features.

INTRODUCED into clinical medicine in 1963[1], allopurinol (Zyloprim®) has become in the ensuing 13 years the most commonly employed drug for the control of hyperuricemia. Minor adverse effects have been reported in 10-15% of all persons exposed to allopurinol, the majority being skin rashes of short duration and of little clinical consequence.[2]. There have also been rare reports of severe life-threatening reactions, such as exfoliative dermatitis, granulomatous hepatitis and agranulocytosis.[3,4] Within the past two years, a characteristic illness suggestive of a diffuse hypersensitivity reaction has occurred in a very small number of patients.[5,6,7] The purpose of this communication is to describe two allopurinol-hypersensitive patients who were admitted to the Medical College of Virginia Hospitals in 1976 and to review 15 similar cases that have been reported in the English literature.

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Case Reports

Case 1

An 81-year-old black female was admitted to MCV Hospital on September 13, 1976, with the complaint of a generalized intensely pruritic rash. She had a history of diabetes mellitus, hypertensive heart disease and mild chronic renal failure, for which she took digoxin, quinidine, spironolactone and furosemide. Three months prior to admission her furosemide dose was increased from 80 to 160 mg daily, and on August 11, 1976, she was placed on 300 mg of allopurinol a day because of a uric acid level of 9.9 mg%. Four weeks later she developed periorbital swelling, generalized erythema and pruritis. She denied chills, fever and lymphadenopathy. Admission white count was 13,500/cu mm with a normal differential, BUN 46 mg%, creatinine 3.2 mg%, LDH 330, SGOT 59 and alkaline phosphatase 148 mU/ml (normal 25-84 mU/ml). She was thought to have a beginning exfoliative dermatitis and the allopurinol was stopped. She improved over the next three weeks with the use of a corticosteroid preparation to her skin. A skin biopsy performed on admission revealed a toxic erythema. Her BUN on discharge was 15 mg%.

Case 2

A 53-year-old black male was admitted to the Medical College of Virginia Hospital on September 26, 1976 with a two-day history of chills, fever and reddened, peeling skin. Hypertension had been present for several years and was managed by a thiazide diuretic. During the summer of

1976, a diagnosis of gout was made on the basis of a uric acid level of 8.8 mg%. He was placed on colchicine and probenecid. On September 1, 1976, 300 mg of allopurinol daily was added to this regimen. He was admitted 26 days later with maculopapular, scaling, pruritic skin lesions and multiple nontender supraclavicular and axillary lymph nodes. Admission white count was 8900/cu mm with 5% eosinophils, BUN 51 mg%, and creatinine 5 mg%. Allopurinol was stopped the day after admission and he was begun on prednisone, 60 mg a day. His hospital course was stormy with continuing renal failure, hepatitis, GI bleeding, seizures and a waxing and waning exfoliative skin rash. Each attempt to reduce his corticosteroid dose resulted in a worsening of his disease. A liver biopsy performed one month after admission revealed granulomatous hepatitis. A renal biopsy performed on 1/5/77 revealed chronic glomerulonephritis with crescent formation. He died on January 29, 1977, from progressive renal disease and gastrointestinal bleeding.

Discussion

These two cases were characterized by the development of an acute illness and a diffuse skin rash four weeks after the institution of allopurinol therapy. Both patients had deteriorating renal function and the second patient required dialysis. Comparative features of these patients and of 15 patients previously reported appears on Tables 1 and 2.

Several historical characteristics are common to these 17 patients and are important for prompt identification of this syndrome (Table 1). 1) Therapy with allopurinol was started in all patients because of hyperuricemia (defined as uric acid above 8 mg%); however, only six patients ever had definite gout. Eight of the patients did not have gout, and, in three, the diagnosis was questionable. 2) 14 of the patients were hypertensive, and, with the exception of two patients, all were on oral diuretic agents. 3) All but one (#17) of the patients had an elevated BUN, and/or creatinine prior to the initiation of allopurinol therapy. Values were not mentioned in one case. 4) The dose of allopurinol prescribed was between 200 and 400 mg/day. The total daily dose was not reduced in those patients with compromised kidney function, despite availability in the package insert of a formula for determining decreasing doses with increasing renal failure.

The illness is delayed in onset and characteristically appears 30 days after allopurinol therapy is begun. There were four exceptions in the cases reviewed. Two patients developed a rash at seven days and two developed it at 47 days. The rash is a maculopapular, desquamative eruption that is frequently pruritic in nature. Toxic epidermal necrolysis, documented by skin biopsy, was described in four cases.[8,9] The initial white count is extremely variable but eosinophilia is considered to be one of the hallmarks of the syndrome. It was seen in 13 of the cases reviewed but only in one of our two patients.

The course of this illness is one of progressive renal dysfunction, as was seen in 13 out of 15 cases reviewed. Several of the patients with a more severe involvement required hemodialysis. The urinalysis was abnormal in virtually all of the patients, with RBC's, WBC's and RBC casts seen on microscopic exam. Abnormal liver function tests or hepatomegaly were found in more than one-half of the cases. Le-

ALLOPURINOL HYPERSENSITIVITY IN 17 PATIENTS

Table 1. Pretreatment Data.

Case	Age	Hypertension	Diuretic Use	Prior Renal Function	Uric Acid	Diagnosis of Gout	Allopurinol Dose
MCV	81	Not known	Yes	BUN 33	9.9	No	300 mg
MCV	53	Yes	Yes	BUN 22, Cr 1.9	12.6	No	300 mg
Mills[5]	52	Yes	Yes	BUN 55, Cr 3.2	12.6	Yes?	200 mg
Mills[5]	59	Yes	Yes	BUN 18, Cr 1.7	6.9	Yes?	200 mg
Jarzobski[12]	76	Yes	Yes	Not known	9.5	No	300 mg
Young[7]	40	Yes	Yes	BUN 43	12.5	?	200 mg
Young[7]	67	Yes	Yes	BUN 66, Cr 4.0	18.0	Yes	300 mg
Utsinger[6]	57	Yes	Yes	BUN 34, Cr 1.4	12.1	No	300 mg
Ellman[9]	76	Yes	Yes	BUN 58, Cr 3.8	14.3	Yes	400 mg
Ellman[9]	60	Yes	Yes	BUN 34, Cr 1.3	11.0	Yes	300 mg
Ellman[9]	45	Yes	Yes	BUN 31, Cr 2.5	11.1	No	400 mg
Lockard[13]	25	Not known	?	BUN 46	9.0	Yes	Unknown
Kantor[8]	72	Not known	?	BUN 28, Cr 1.8	9.6	Yes	200 mg
Meyrier[14]	51	Yes	?	BUN 80	9.1	Yes	300 mg
Bailey[15]	57	Yes	Yes	Cr 2.8	8.6	No	200 mg
Butler[10]	48	Yes	?	BUN 40, Cr 6.1	15.1	No	Unknown
Gelbert[16]	53	Yes	Yes	BUN 18, Cr 1.1	11.0	No	300 mg

Table 2. Clinical Features.

Case	Onset in Days	White Count (cu mm)	Eosinophils (%)	Increase in Renal Failure	Abnormal Liver Function Tests
MCV	30	13,500	0	+	+
MCV	26	8,900	5	+	+
Mills[5]	25	20,000	6	+	na
Mills[5]	42	9,000	16	+	na
Jarzobski[12]	25	6,000	9	+	+
Young[7]	30	10,000	8	+	+
Young[7]	30	6,900	16	+	+
Utsinger[6]	29	13,700	38	na	+
Ellman[9]	24	8,200	5	+	na
Ellman[9]	30	11,000	11	na	na
Ellman[9]	27	8,500	20	+	na
Lockard[13]	24	na	na	+	na
Kantor[8]	7	7,050	13	+	+
Meyrier[14]	30	na	na	+	na
Bailey[15]	42	na	na	+	na
Butler[10]	42	25,000	45	+	+
Gelbert[16]	30	20,900	23	+	+

NA = not available

sions described as granulomatous hepatitis were seen on liver biopsy in Case 2, and massive hepatic necrosis was reported recently by Butler.[10] Gastrointestinal bleeding was another frequent complication noted. Case 2 had several episodes of upper gastrointestinal bleeding during his illness.

The duration of the syndrome is prolonged, with recovery time after cessation of allopurinol being highly variable, ranging from ten days to six months. Death occurred in six cases, with sepsis and progressive uremia as the major offenders.

Treatment of the patients with this illness mainly involves careful attention to supportive care of the patient during the acute stages. It is imperative that allopurinol be stopped. In many cases corticosteroids have been employed, with reduction in skin and kidney involvement. Relapses are common, however, when steroids are stopped or reduced.

Ampicillin should be avoided when choosing antimicrobial coverage in patients being treated with allopurinol, especially in those who already have an allopurinol hypersensitivity. The Boston Collaborative Drug Surveillance Program[11] found that rashes occurred among 22.4% of 67 hospitalized patients receiving allopurinol and ampicillin concomitantly. However, the rash occurred in only 7.5% of 1257 patients receiving ampicillin alone and in 2.1% receiving allopurinol alone. There were also two instances of worsening skin rash among the cases reviewed when ampicillin was administered for several days in the face of the preexisting allopurinol rash. From these data it has been concluded that the concomitant administration of these two drugs increases the incidence of rashes and prolongs the disease of those who already exhibit a rash.

The mechanism causing the hypersensitivity to allopurinol is presently unknown. A report from Kantor et al[8] stated that deposits were found that stained positively for IgG on the glomerular basement membrane. In contrast, Utsinger[6] reported seeing deposits of IgM at the dermal-epidermal junction, and circulating immune complexes were found in the serum of the patient. These two reports suggest that the pathogenesis of systemic allergic vasculitis from allopurinol has an immune basis, although further studies of this mechanism are needed.

Whatever the mechanism, certain conclusions can be drawn from a review of these cases. 1) Allopurinol can produce a potentially fatal hypersensitivity syndrome that is characterized by rash, fever, eosinophilia, lymphadenopathy and progressive renal failure. 2) Recovery is often prolonged. Steroids are effective; however, relapses are common when steroids are reduced. Death, if it occurs, usually results from progressive azotemia, sepsis or GI bleeding. 3) Asymptomatic diuretic-induced hyperuricemia need not be treated with allopurinol. If the patient must have allopurinol because of confirmed gout, the dosage should be reduced proportionally to the degree of renal failure. A formula for reducing the dosage is available in the drug package insert. 4) One cannot predict which patients will develop the syndrome, but patients with hypertension and azotemia seem particularly susceptible.

Prevention of this syndrome can be accomplished only by decreasing the use of allopurinol, particularly in patients without confirmed gout. More than one-half of the reviewed patients would not have developed the syndrome had this simple criterion been followed.

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Microsurgical Cerebral Revascularization for the Treatment of Stroke

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A study of 1,000 STA-MCA by-pass procedures in stroke patients is described as "extremely encouraging", with greater than 90% patency rate and marked improvement in patients who had not responded to medical management or had been turned away from routine vascular surgery.

CEREBROVASCULAR occlusive disease has been and continues to be a leading cause of death and disability throughout the world. In the United States, stroke is third in frequency after heart disease and cancer as a medical cause of death and disability[1]. About 80 to 90% of strokes are a result of cerebral vascular occlusive disease[2]. Surgical treatment of occlusive vascular diseases, principally carotid endarterectomy, is accepted method of treatment of a large number of patients with surgically accessible lesions. However, only about 70% of patients have surgically accessible lesions in the extracranial circulation; the remaining 30% have occlusive disease which cannot at present be treated by carotid endarterectomy. Anticoagulation and/or the use of antiplatelet aggregation drugs appear to be of benefit in certain patients. However, a considerable number of patients are poor candidates for medical therapy, i.e., hypertension, ulcers, unreliability, etc. Another smaller but significant group of patients continues to have symptoms in spite of adequate anticoagulation and proceed to permanent cerebral infarction. Austin has estimated that there are about 12,000 patients with inoperable lesions by conventional vascular techniques who might be candidates for a by-pass procedure of an obstructed or stenosed intracranial vessel[3].

In 1967, following the development of the operating microscope and minaturization of suture material, a new microvascular by-pass procedure was developed by Donaghy and Yasargil[4,5]. Blood was diverted from a scalp vessel, the superficial temporal artery, to a middle cerebral artery branch on the surface of the brain to provide blood supply distal to the site of the occluding lesion. This approach constructing an iatrogenic collateral vessel to the brain offered the possibility of surgical treatment for previously inoperable lesions.

Theoretically, the value of the superficial temporal artery-middle cerebral artery (STA-MCA) anastomosis relates to the question of whether the pathogenesis of transient ischemic attack (TIA) and reversible ischemic neurologic deficit (RIND) is related to decreased total brain perfusion from inadequate collateral circulation in the presence of occluded or stenosed vessels, or secondary to emboli associated with ulcerated atheromatous plaques. There has certainly been adequate documentation of the ulcerative, stenotic plaque at the carotid bifurcation discharging emboli during TIA's (i.e., cholesterol emboli visualized in fundus during an episode of amaurosis fugax). There is also a certain number of TIA's which result from transitory depression of cardiac output in patients who have a depressed cerebral blood flow

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(CBF) based on a major vascular occlusion, cerebral small vessel disease or a high stenosis. Evidence of this comes from studies by Sengupta et al in baboons following carotid ligation. They showed that the cerebral vasculature cannot respond to stress (anoxia, CO_2 reactivity, and changes in BP) in the normal manner after ligation of a carotid artery[6,7]. This suggests that when the blood flow is borderline, due to a basic lesion, a further stress, such as a drop in pressure by decreased cardiac output, may not be compensated by the normal process of autoregulation, and thereby provides the setting for the occurrence of TIA and/or stroke. Clinical symptoms in patients with multiple large vessel occlusions who complain of intermittent dizziness, incoordination, blurred vision, syncope, mental deterioration and transient motor and sensory deficits appear to be due to generalized depressed cerebral perfusion. In patients with multiple vessel involvement who have a borderline normal CBF, any combination of additional occlusive process and/or drop in perfusion pressure can result in TIA, RIND, small stroke or set the stage for a rapidly progressing stroke. In this situation additional collateral circulation could prevent permanent stroke as seen in the cases below. A large group of workers have shown that 25-40% reduction in gray matter flow is sufficient to produce the onset of symptoms[8-11].

Method

The extracranial-intracranial anastomosis has been performed at the Medical College of Virginia essentially as originally described by Donaghy and Yasargil[4,12,13] (Fig. 1). A frontal temporal incision is made

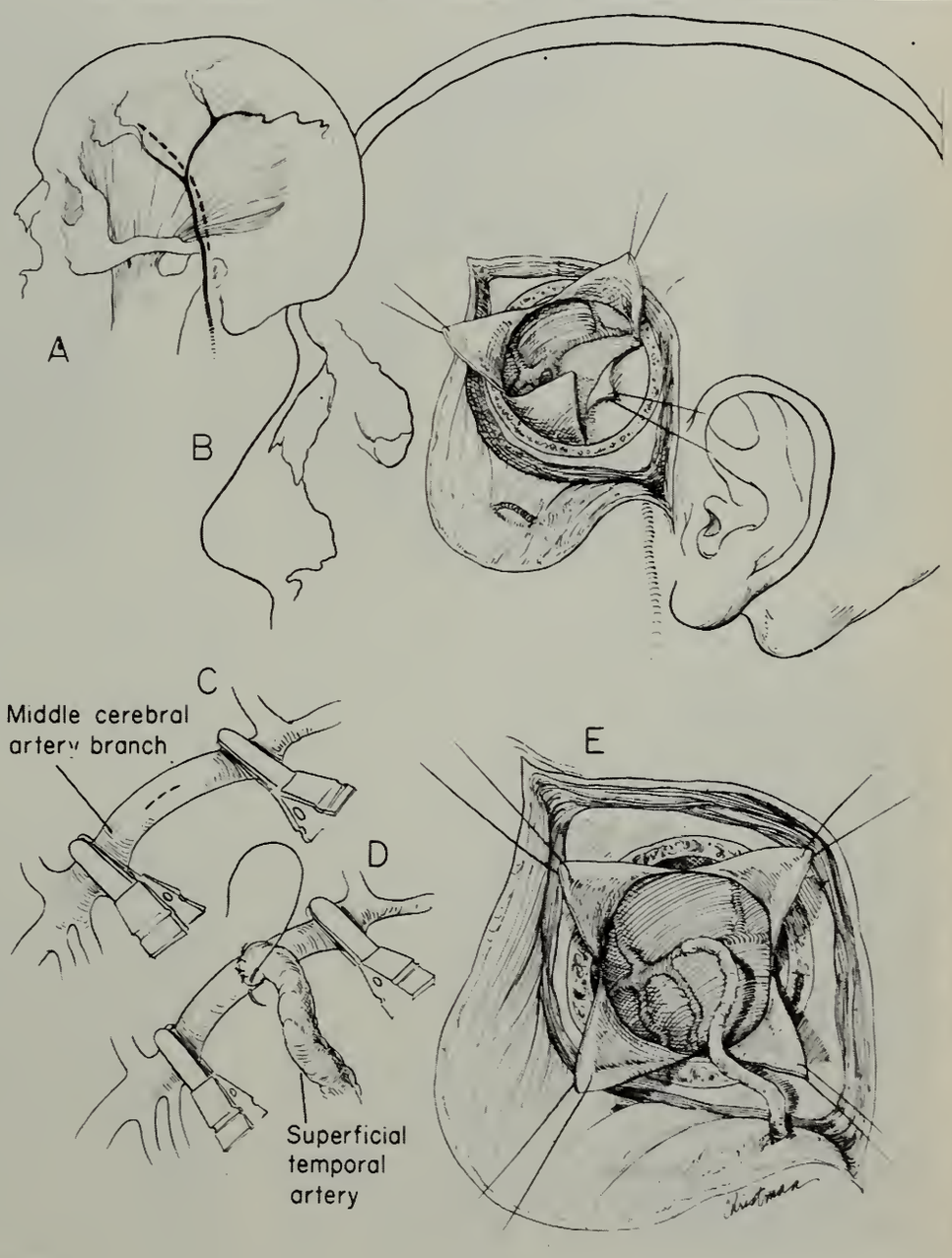


Fig. 1. Superficial temporal artery, middle cerebral artery branch anastomosis. A. Incision along superficial temporal artery. B. Small craniectomy over Sylvain vessels. C & D. Arteriotomy with end-to-side anastomosis. E. Completed anastomosis.

to include both branches of the STA. The branches of the artery are meticulously dissected using the operating microscope. The brain is exposed over the Sylvian fissure through a craniectomy of about 3-4 cm in diameter. A recipient cortical artery is selected on the basis of size, absence of penetrating branches and location. The most commonly used branches have been opercular, angular and temporal. If the situation suggests that a particular area is at risk and if a suitable cortical vessel can be identified as serving the area, this vessel is selected. Temporary clips are placed across the selected vessel. An elliptical incision is made and an internal silicone rubber stent inserted to keep the edges apart. The superficial temporal artery is brought into the field and an end to side anastomosis performed utilizing 10-0 suture. The stent and temporary clips are removed. Patency can be observed by the pulsating vessels.

Case 1.

H. C. is a 48-year-old white male who in December of 1975 was admitted on the orthopedic service with numbness of the fourth and fifth digits of the right hand. Over a two-week period the patient's entire right hand became numb, and he developed weakness of his hand. An anterior fusion was performed. The numbness remained but strength improved immediately postop. He did well during the next three months but was readmitted on the orthopedic service in July because of progressive weakness of his right hand and difficulty with speech. The patient had had one episode of complete right hemiplegia and aphasia which did not clear completely. Examination at the time of admission showed a moderate right hemiparesis with minimal aphasia. Angiography was performed demonstrating an occluded left internal carotid and 90% stenosis of the right internal carotid. The patient continued to deteriorate in spite of adequate heparinization over the next two weeks. Preoperatively the patient was unable to follow commands and would only mumble to noxious stimuli. There was a flaccid right hemiplegia. A left STA to angular branch anastomosis was performed. By the next morning the patient was able to follow commands and stated his name. One week postop there was gross movement of the right extremities sufficient to ambulate, and the patient was able to talk in phrases. At one-year followup the patient is ambulating but has only gross movements of his right side. He is able to communicate in a halting speech with some perserveration to questions.

Case 2.

J. C., a 52-year-old black male, developed left-sided weakness in 1970. An angiogram revealed 90% stenosis of the right internal carotid artery. At surgery the internal carotid artery was found to be thrombosed and an endarterectomy was not performed. During the next year his left hemiparesis cleared. He did well until November 1976 when he had a sudden episode of left-sided weakness which cleared over 24 hours, followed by a sudden episode of difficulty in talking, weakness of the right side of his body and numbness. This cleared with the exception of numbness in the right hand, only to have another episode within 12 hours. X-ray revealed bilateral internal carotid artery occlusions (Fig. 2). In spite of adequate heparinization the patient continued to have frequent episodes of transient hemiplegia. Following each episode the patient was left with a greater neurologic deficit. Preoperatively the patient could not verbalize and could only occasionally follow simple commands. A moderate right hemiparesis was present. A left STA to MCAB anastomosis was performed (Fig. 2). Postoperatively the patient was able to follow two stage commands and the hemiparesis improved. At followup the patient has minimal hemiparesis and some speech difficulty, but he is able to follow commands and able to respond and ask questions using short phrases.

Discussion

These cases illustrate that the iatrogenic collateral circulation was important in recovering apparently lost function. Progressive neurological deficit seen in these cases was most likely the result of decreased perfusion as a result of inadequate collateral circulation. The volume of CBF cannot be accurately predicted on the basis of angiography alone. CBF must be measured directly. Patients with high-grade stenotic lesions often have both ipsilateral and contralateral decreased flow[14-17]. Following STA-MCA anastomosis, Austin[3], Reichman[16], and Schmiedek[18,19] demonstrated a statistically significant increase in CBF both regionally and globally. Using electromagnetic flow-meters Crowell found that the anastomosis provided 20-40 ml per min (20). Although this accounts for only about 25% of the total middle cerebral artery flow initially, enlargement of the vessels has been observed with time. Eventually the by-pass provides enough flow to supply the entire middle cerebral artery circulation.

Our clinical experience at MCV has been extremely encouraging and concurs with that of others. About 1,000 STA-MCA by-pass procedures have been performed. Combining the overall results from several large reported series, about 85% of those operated upon for TIA and/or RIND were considered improved, while for strokes in progress or completed stroke, about 40-80% improved their neurologic deficit[3,16,21]

In a series of 70 patients with an average followup of 16 months, two strokes occurred in the hemisphere supplied by the by-pass (3%)[22]. This compares favorably with the Mayo group of 200 patients with inoperable carotid lesions who had a 22% stroke occurrence by 16 months[23]. There have been no reported deaths attributed to this procedure, although there has been a 3-5% mortality in this group of patients.

The most common cause of death has been myocardial infarction. About 6% of the patients were transiently worse following surgery, and only one case has been reported in which the increased neurologic deficit was permanent. The permanent deficit in this single case was probably due to aneurysm rupture which was operated upon at the same time. Scalp necrosis occurs in about 3% of the cases.

The indications for microsurgical cerebral revascularization are quite specific. These procedures are to be considered only when conventional medical therapy and/or disobliterative vascular techniques are inappropriate, inadequate or contraindicated in patients who are symptomatic. Thus, candidates are considered to be those patients who have 1) complete chronic obstruction of the internal carotid artery; 2) fibromuscular hyperplasia, where disease extends into the base of the skull; 3) severe stenosis of the internal carotid artery at the base of the skull; 4) lesions of the proximal middle cerebral artery; and manifest clinical TIA, RIND, progressing stroke or generalized hypoperfusion syndromes.

Contraindications to the by-pass procedures are similar to those of carotid endarterectomy: completed stroke, and any process in which prognosis is extremely poor, i.e., malignancy; myocardial in-

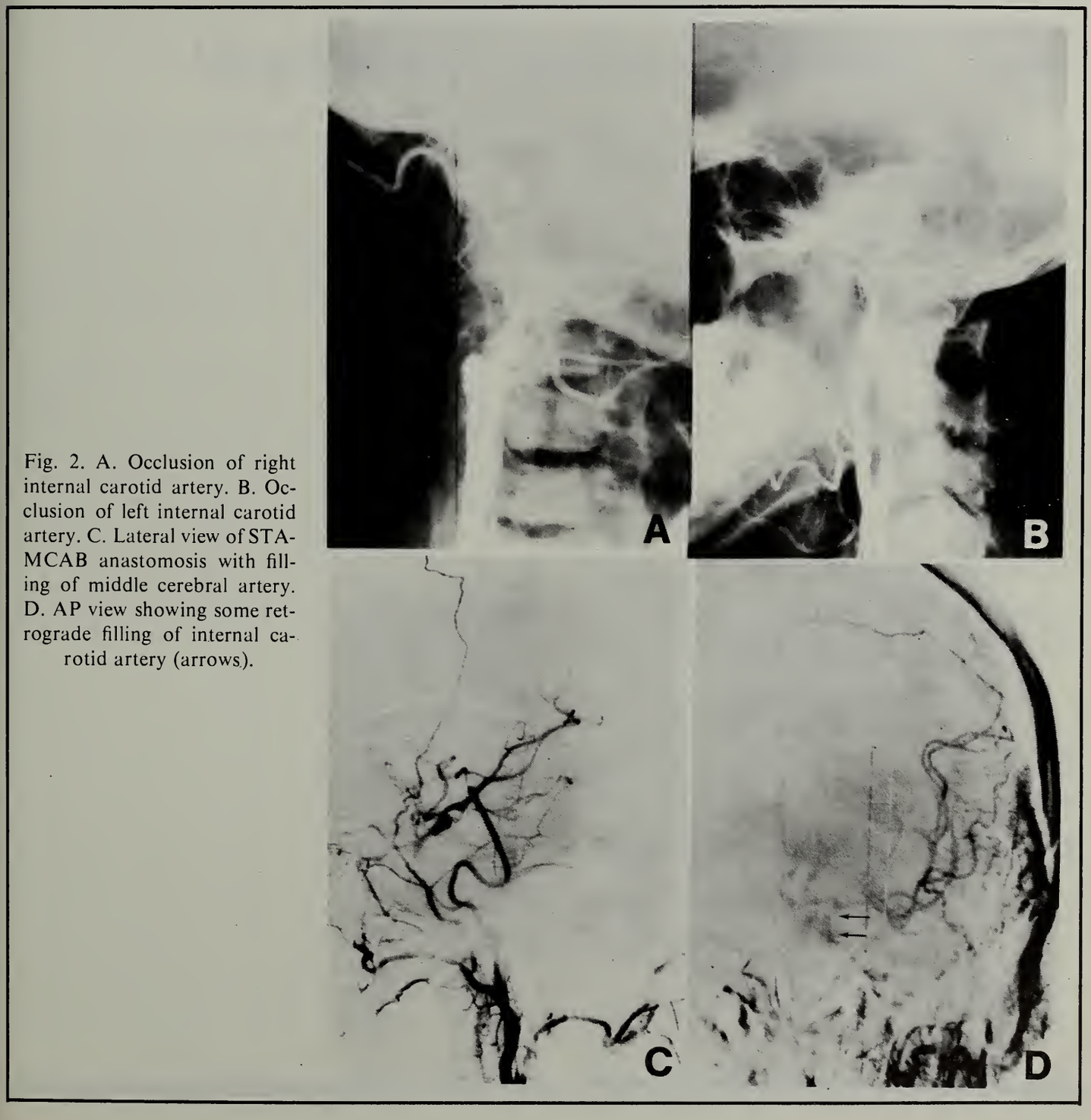


Fig. 2. A. Occlusion of right internal carotid artery. B. Occlusion of left internal carotid artery. C. Lateral view of STA-MCAB anastomosis with filling of middle cerebral artery. D. AP view showing some retrograde filling of internal carotid artery (arrows).

farction within a six-month period of time; severe, unstable ischemia or valvular heart disease; severe liver, pulmonary or renal disease. Severe vascular disease which involves the external carotid artery precludes surgery since no suitable donor vessel is available.

Conclusion

Superficial temporal artery-middle cerebral artery anastomosis has been successfully performed at MCV with greater than 90% patency rate. It appears to be successful in alleviating symptoms or improving neurologic function in a significant number of patients who have not responded to medical management and have been turned away from routine vascular surgery.

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Changing Survival Rates in Infants with Respiratory Distress Syndrome

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The outcome of 434 infants with respiratory distress syndrome was reviewed for a three-year period, showing that survival rates have increased from 69.6% to 82.7%. Improved techniques in respiratory therapy and patient management have played major roles in lowering mortality rates.

RESPIRATORY distress syndrome (RDS) or hyaline membrane disease is the most common cause of respiratory insufficiency in the newborn period and primarily affects premature infants. This disorder continues to be a major cause of neonatal morbidity and mortality despite the role that advances in respiratory therapy and neonatal intensive care practices have played in improving survival rates in recent years. We recently reviewed our experience at the Medical College of Virginia using various respiratory support modalities for managing infants with this disease. A brief historical review of the respiratory distress syndrome is presented first in order to place this study in proper perspective.

The presence of hyaline membranes within the lungs of infants dying the first few hours of life was originally described in 1903.[1] The etiology of hyaline membrane disease remained unexplained, however, until Avery and Mead presented their classic work in 1959.[2] They demonstrated that the lungs of many infants who died from this disease were deficient in a surface active agent, later called surfactant. This substance normally reduces surface tension forces within the lung and prevents alveolar collapse at the end of expiration. Without adequate alveolar stabilization, widespread atelectasis develops in infants with RDS. With each inspiration, large distending pressures are required to expand collapsed alveoli, and the infant's work of breathing is markedly increased. In addition, hypoxia and acidosis occur secondary to ventilation-perfusion abnormalities in the atelectatic portions of the lung.

The survival rate of infants of all birth weights with RDS in the late 1950's was approximately 40%.[3] Affected neonates either recovered spontaneously or rapidly tired and died at a few hours of age in respiratory failure. Following the incrimination of oxygen in 1953 as the causative factor of retrolental fibroplasia, it was used rather sparingly in nurseries and rarely in concentrations above 40%. Consequently many infants with RDS died, probably from acute or chronic hypoxemia. Adequate oxygen usage may have prevented many of these deaths. In addition, laboratory and sampling difficulties prevented the routine monitoring of arterial blood gases. By the early 1960's, however, physicians were becoming much more aggressive in managing infants with RDS. Oxygen was used more frequently and in higher concentrations in order to relieve cyanosis. Furthermore, an increasing number of infants were being placed on mechanical ventilators in an attempt

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to manage their respiratory failure. Concurrently, improved techniques in the field of blood gas analysis coupled with the use of umbilical catheters for easy arterial sampling enabled clinicians to follow closely the arterial blood gas status of infants with RDS and other respiratory problems. During this time, survival rates in RDS infants mechanically ventilated ranged from 21-53%.[4] Survival in infants less than 1500 gms mechanically ventilated was only 8-33%.[3,5,6] By the end of the decade, the overall survival rate in infants with RDS had risen to 60%.[3] However, the actual benefits of mechanical ventilation were somewhat difficult to evaluate because other areas of neonatal care influencing survival also had improved. Additional important advances had occurred in the fields of nutrition, hydration, acid-base balance and temperature control.

The most recent breakthrough in the management of the respiratory distress syndrome followed investigative work performed by Harrison et al on the physiological effects of the expiratory grunting observed frequently in RDS infants.[7] They discovered that the grunting infant increases transpulmonary pressure by exhaling against a partially closed glottis and subsequently prevents alveolar collapse at the end of expiration. If grunting is prevented by the placement of an endotracheal tube in the trachea, the arterial blood gases will deteriorate. From this study and additional work in adults, the concept evolved of utilizing a constant lung distending pressure throughout the respiratory cycle to decrease or prevent the atelectasis of RDS. This constant lung distending pressure may be delivered to the spontaneously breathing infant by either continuous positive airway pressure (CPAP) through the infant's airway or by continuous negative pressure (CNP) surrounding the infant's chest. If the infant is mechanically ventilated, the positive airway pressure applied during the expiratory phase is termed positive end expiratory pressure (PEEP). Gregory, in 1971, was the first to report the use of CPAP in RDS.[4] Improved p02 values were noted in infants treated with CPAP and were thought to reflect a reduction in atelectasis, corrected ventilation-perfusion abnormalities and a decreased work of breathing. Using this additional mode of therapy, Gregory reported an overall survival rate for infants with RDS of 76%. Although survival rates of infants receiving CPAP alone was almost 100%, survival in infants requiring mechanical ventilation in his series was only 20-25%.[8]Highest mortality figures continued to occur in infants under 1500 gms and in those infants requiring mechanical ventilation within the first 24 hours of life. Our recent experience would indicate that survival rates in RDS infants managed with respiratory support are continuing to improve.

Patients and Methods

During the 36 months from October 1, 1973, through September 30, 1976, 434 patients with RDS were admitted to the Neonatal Intensive Care Unit at the Medical College of Virginia in Richmond. After evaluating each infant's arterial blood gases and clinical status, specific criteria were used to determine whether the neonate required only supplemental oxygen by oxyhood or needed additional respiratory support. A group of 146 infants was treated exclusively with warmed, humidified oxygen delivered by oxyhood. The other 288 patients required respiratory support in the form of CPAP and/or mechanical ventilation and comprised the study group reviewed. In those patients who received respiratory support, 168 were initially begun on CPAP. In this group, 78 patients later were advanced to mechanical ventilation because of increasing respiratory failure or apnea. In the remaining 120 patients, profound hypoxia, hypercapnia or apnea necessitated the use of mechanical ventilation as the initial form of respiratory support.

Of the respiratory support patients, 104 (36.1%) were born at the Medical College of Virginia. A total of 184 (64.9%) was transferred from hospitals either in Richmond or within a 100-mile radius of the city. The diagnosis of RDS was based on clinical signs of tachypnea, retractions, grunting and cyanosis, and chest radiographic evidence of a diffuse reticulogranular pattern with air bronchograms. All infants were placed under radiant warmers or in isolettes to maintain a neutral thermal environment. Heart rate, respiratory rate, blood pressure, temperature and blood sugars were carefully monitored. Intravenous fluids with D-10-W at 70-100 cc/Kg were given for the first two days, and then changed to D-10-1/4 NS. Peripheral alimentation with a protein hydrolysate-amino acid solution and glucose was begun by day #3 if po feedings were not feasible. All IV fluids were given initially by umbilical artery catheter placed below the renal arteries or by peripheral vein. Albumin or fresh frozen plasma was given for systolic blood pressure less than 40. Infusions of sodium bicarbonate were used to correct metabolic acidosis. All infants were transfused with packed red cells when the peripheral hematocrit was less than 40%. Formula feedings were begun following the discontinuation of respiratory support and the resolution of tachypnea. Arterial blood gases were monitored frequently. Samples were obtained by umbilical artery catheter or peripheral arterial puncture. Continuous positive airway pressure was delivered by endotracheal tube or nasal Portex tubes positioned in the posterior pharynx. Criteria for the initiation of CPAP

Table 1. Survival of Infants with RDS for Three Periods, 1973–1976

Period	CPAP		CPAP → MV		MV		ALL RS		ALL RDS	
	# Pts.	S (%)	# Pts.	S (%)	# Pts.	S (%)	# Pts.	S (%)	# Pts.	S (%)
10/1/73–9/30/74	18	94.4	29	27.6	32	37.5	79	46.8	135	69.6
10/1/74–9/30/75	39	97.4	25	68.0	30	60.0	94	77.7	137	84.7
10/1/75–9/30/76	33	97.0	24	91.7	58	56.9	115	75.6	162	82.7
Totals	90	96.7	78	60.2	120	52.5	288	68.4	434	79.0

S = survival
MV = mechanical ventilation
RS = respiratory support (CPAP and/or MV)
CPAP → MV = patients requiring MV after an initial trial of CPAP

included progressive deterioration of the patient's clinical status or arterial blood gases, p02 less than 60 torr in 60% 0_2, moderate pC02 elevations (pC02 50-60 torr) or frequent apnea. All mechanically ventilated patients were intubated with Portex endotracheal tubes. The MA-I Ventilator modified for use in infants and the Bourns Infant Ventilator were used almost exclusively. Indications for mechanical ventilation included progressive deterioration with CPAP, profound apnea, inability to maintain a p02 of 60-70 torr in 60% 0_2 or greater, or a pC02 greater than 70 torr. In almost all instances, the PEEP modality on the ventilator was utilized.

Results

The overall survival rate of infants with RDS during the three-year period reviewed was 79% (Table 1). Survival in those requiring respiratory support was 68.4%. Although yearly survival rates in patients who received CPAP alone were essentially unchanged over the study period (94.4-97.4% with an overall survival of 96.7%), a significant increase in survival was noted in patients who required mechanical ventilation after an initial trial of CPAP (27.6% the first year vs 91.7% during the third year for an overall survival of 60.2%). In addition, there was substantial improvement in the survival rates of infants begun initially on mechanical ventilation after the first year. Survival increased from 37.5% the first year to 60% in the second and 56.9% in the final year reviewed. Overall survival of the mechanically ventilated infants was 52.5%.

Complications of respiratory support occurred in a significant number of patients. Pneumothoraces or other air block phenomenon developed in 48 (16.7%) of the infants. Only 47.9% of these patients survived. Bronchopulmonary dysplasia (BPD), a progressive disease of the lung parenchyma and airways, occurred in 33 (11.4%) of the respiratory support infants. Although seen primarily in infants requiring mechanical ventilation and high oxygen concentrations, one case in our series was diagnosed in a neonate treated exclusively with CPAP. Seventeen (52.5%) of the BPD patients survived.

Survival in the 140 respiratory support infants less than 1500 gms was 52.8%. Morbidity was also significant. Seventy-five percent of the cases of BPD, 40% of all air blocks, and 73% of the deaths in respiratory-support infants occurred in this weight classification. In addition, infants less than 1500 gms who were transferred from a referral hospital and later required respiratory support had a lower survival rate (46.8%) than inborn respiratory support infants of similar birth weight (60.3%). The overall inborn vs outborn survival of RDS infants of all birth weights was similar, however (67.3% vs 69.0%).

Discussion

The increased survival seen in infants with RDS during the past 20 years reflects improved techniques in overall patient management and in ventilatory support of respiratory insufficiency. Very few neonates now die primarily from respiratory failure. Concurrent central nervous system hemorrhage, pulmonary hemorrhage, bronchopulmonary dysplasia or overwhelming sepsis are the major causes of death in most RDS infants.

Although results in our nursery and elsewhere would indicate that CPAP is an excellent treatment modality for managing infants with RDS, this type of respiratory support has definite limitations. Despite CPAP therapy, progressive respiratory insufficiency occurred in 46.4% of the patients and necessitated the use of mechanical ventilation. In other series, the incidence of CPAP failures has ranged from 18-67%.[9] Because a significant number of neonates initially begun on CPAP may rapidly deteriorate clinically and require mechanical ventilation, the utilization of CPAP in nurseries without the ready availability of additional respiratory support equipment should be discouraged. In the past, reported survival of infants failing CPAP therapy has been distressingly low,

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varying from 14-33%.[9] The 60.2% survival in our study is extremely encouraging and reflects increased experience in the management of mechanically ventilated infants and early recognition of impending respiratory failure.

The development of some of the major complications of mechanical ventilation in infants with RDS is partly dependent upon the severity of the disease and the subsequent need for more vigorous ventilatory assistance. The incidence and associated mortality of both pneumothoraces or other air-block phenomenon and BPD in our series compare favorably with other published reports.[9,10] The chronicity of BPD contributes significantly to the morbidity of many RDS infants. Fortunately the newborn lung is a dynamic organ with excellent reparative processes, and many surviving BPD infants recover without residual cardiopulmonary symptomatology.

Despite the fact that advances in the respiratory support of infants with RDS have been accompanied by an increase in some forms of morbidity, these developments have contributed significantly to the changing survival rates. Both the quantity and quality of life of the newborn are improving, and the immediate and long-term outlook for the infant with respiratory distress syndrome in this decade is extremely favorable.

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The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

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CANCER TRENDS

Edited by J. Shelton Horsley, III, MD, Gerald Goldstein, MD, and Francis E. Rosato, MD.

Role of Radiation Therapy In Primary Treatment of Breast Cancer: A Point of View

Richard Belgrad, MD, *Richmond, Virginia*

"Segmental mastectomy with irradiation to the breast and regional nodes appears to produce in many women the same results as more radical surgery and yields a better quality of life. It should be employed more often. Postoperative radiation is effective in reducing local recurrences following mastectomies for locally advanced disease. Regardless of success with local treatment, improved survival in breast cancer awaits the discovery of a more effective systemic adjuvant."

OVER the years there have been few topics in medicine as controversial and emotional as the treatment of breast cancer. Even with more information available about spread and recurrence patterns, most surgeons seem reluctant to change traditional operative approaches. The recent popularity of adjuvant chemotherapy has led to the virtual abandonment of postoperative radiation therapy. *Is there still a place for radiation therapy in the primary treatment of breast cancer?* Many careful trials suggest that different forms of local therapy have resulted in similar survival and local control for operable breast cancer.[9,16] More to the point, more radical surgical procedures have not improved survival.[6] On the other hand, local, wide excision with conservation of the breast and adjuvant radiotherapy is a comparable alternative to radical or modified-radical mastectomy for the treatment of many small breast cancers, with superior cosmetic and psychological results.[2,8,9,13,15,16,17,21,22] In general, five-year survivals of 75-85% for Stage I and 50-60% for Stage II seem to be the rule no matter what the treatment[16] (Table 1). Five-year disease-free survival is a satisfactory measure of local treatment as most local failures will occur in this time span (Table 2).

Most observers nowadays agree that both surgery and irradiation are essentially local forms of therapy for disease which is already systemic at diagnosis in many.[4,6] The objectives of local therapy are essentially fourfold:

1) achieve maximum control of local disease,
2) prevent local recurrence,
3) reduce tumor cells to a minimum to enhance the effect of adjuvant therapy,
4) conservation of the breast, if possible.

Achieving maximum control of the local tumor and thereby improving survival has been the surgical

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Table 1. Clinical Staging, Carcinoma Breast.

Stage 1:	Tumor confined to the breast. No fixation and no palpable axillary nodes.
Stage 2:	Tumor confined to the breast with palpable, movable axillary nodes. No grave signs.
Stage 3:	Locally advanced tumor, characterized by skin invasion, fixation, ulceration, or edema; tumor fixation to underlying muscle or chest wall and/or fixation of axillary nodes.
Stage 4:	Any stage with distant metastasis.

goal since Halstead's time, when *en bloc* resection of the breast and axillary nodes was carried out in an attempt to completely encompass the disease. Advances in surgical technique, anesthesia, and postoperative care allowed extension of the surgical attack to include ultimately excision of the supraclavicular and internal mammary nodes in some patients. Yet, in spite of these bolder approaches, there was no significant gain in survival.

Prevention of local recurrence has been an important and worthwhile clinical objective. The realization that successful local eradication of disease was accompanied by no increase in survival when axillary nodes were involved came slowly. Uncontrolled local disease, on the other hand, indicated a much poorer survival with earlier widespread systemic metastasis. Radiation therapy was complimentary to radical mastectomy by preventing local and regional recurrence in many, particularly when axillary nodes were positive. Postoperative radiation was a valuable adjuvant because it addressed the failure pattern observed with classical radical mastectomy alone, when the axilla was involved.[8] With heavy infestation of the axilla, 30-45% of patients showed chest wall recurrence. There was a 10-15% incidence of para-sternal recurrence, mainly in patients with central or inner quadrant lesions. Supraclavicular recurrence developed in 20-25% of patients. A ten-year overall failure of 75% of women with positive axillary nodes has been reported.[4,6] Local and regional recurrence has been reduced to less than 5% with postoperative radiation therapy, though survival has remained essentially the same.[8]

Theoretically, at least, it appears that reduction of aggragates of tumor cells to a minimum with complete local sterilization of disease, by means of surgery and/or irradiation, should facilitate the effectiveness of adjuvant chemotherapy. Unfortunately, this does not seem to be the case with complete surgical extirpation plus chemotherapy, except in a selected subgroup.[4,6] Thus far, the thesis has not been tested with regard to added radiotherapy.

During the past ten years, the definitive trend in the surgical management of breast cancer has been in a more conservative direction.[19] This is expected to continue with the success of other adjuvant forms of therapy. Preliminary results of carefully controlled studies, for example, suggest no difference in the failure rate or survival at three years, comparing radical mastectomy with total mastectomy and irradiation, or total mastectomy plus delayed axillary resection for recurrence, in clinical Stage I.[6]

Is yet more conservative surgery possible? Only if the complimentary therapy is as effective as a more radical operation. Moderate doses of irradiation on the order of 4500-5000 rads are capable of destroying 90% of micro deposits of adenocarcinoma. On the other hand, clinical masses of 2-3 cm in the breast or axilla often require more than 7000 rads for local control; that is a dose that may cause cosmetically unacceptable changes in the soft tissues.[8] Over half of cancers in mastectomy specimens are 3 cm or less in diameter, suggesting that local excision is possible for many patients.[18] To be sure, microscopic disease may well be left behind in the breast, at the tumor site or as multiple micro foci.[7] Some patients with clinically negative nodes will have microscopic involvement, but moderate irradiation to the breast and regional nodes will sterilize most of these foci. Delayed mastectomy or axillary dissection can still be carried out,

Table 2. Carcinoma of the Breast: Local Incision Only Plus Irradiation.

References	#Pts.	Stage	5-yr. Survival (%)	10-yr. Survival (%)	Local Failure (%)
Prosnitz, 1977[16]	150	I	97	...	5
		II	75	...	
Flethcer, 1976[8]	82	I, II	95	80	6
Wise, 1971[22]	96	I	96	62	10
		II	74	53	
Mustakallo, 1954[13]	127	I	84	75	26*
Rissanean, 1969[17]	415	I (T1, T2)	79	71	
Atkins, 1972[2]	220	I	80	80	20
	150	II	58*	25*	65*
Peters, 1967[14]	124	I, II	76	45	11-Breast 13-Axilla
Peters, 1976[15]	145	I	90	74	13

* Orthovoltage

Table 3. National Surgical Adjuvant Breast Project*, Progress Report August 31, 1977

Location of failure	First Reported Site of Treatment Failure: Placebo (%)	L-PAM (%)	All Groups (%)
Local Recurrences			
Chest wall	3.6	6.7	5.2
Scar	1.2	0.0	0.6
Both	3.0	0.6	1.7
Subtotal	7.7	7.3	7.5
Regional Recurrences			
Axilla	1.2	1.7	.1.4
Supraclavicular	4.7	0.0	2.3
Parasternal	0.6	0.0	0.3
Subtotal	6.5	1.7	4.0
Distant Metastases			
Skin	2.4	0.6	1.4
Skeletal	8.3	6.7	7.5
Respiratory	1.8	3.4	2.6
Lymphatic	0.0	1.7	0.9
Digestive	1.8	2.2	2.0
More than 1	4.1	2.8	3.4
Subtotal	18.3	17.3	17.8
Local and/or Regional & Distant	6.0	4.5	5.1
Other	1.2	0.6	0.9
Total failures (%)	39.6	31.3	35.3

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if necessary. The success of this approach depends on the removal of gross clinical masses, both in the breast and in the axilla, for this is where the failures have occurred.[2,14,16]

The other key factor to consider in the management of primary breast cancer is adjuvant chemotherapy—the modality that has had the greatest impact on the changing treatment of breast cancer in recent years. The preliminary results of the National Surgical Adjuvant Breast Project Protocol B-05 indicates no difference in survival at three years between patients having mastectomy and adjuvant L-PAM (phenyl alanine mustard) vs placebo, when the axilla is histologically positive.[5] Only the subgroup consisting of premenopausal patients with one to three nodes positive show a statistically significant benefit. There appears to be little advantage to the postmenopausal group. Comparing the two regimens overall, there is no significant difference between L-PAM and placebo with respect to the site of first recurrence. Almost half of the 35% failures at 36 months have a local or regional component, which might have been prevented by timely radiation therapy, if there were a way to identify this high-risk group (Table 3).

Bonnadonna studied a similar group who received adjuvant therapy with combined cyclophosphamide, methotrexate and 5-fluorouracil.[4] These patients had undergone radical mastectomy or extended radical mastectomy for relatively favorable lesions, in which histologically positive axillary nodes had been discovered. Recurrences have been reduced by almost half at 36 months: 46% of the control group have developed metastasis vs 26% of the CMF group. In the best subset, premenopausal women with less than four positive nodes, the failure rate is only 5% so far. As in the American study, only this group shows statistically significant benefit by three years. The relapse rate among postmenopausal women progressively increases after the first year. The local failure rate remains low. Side effects are reported to be well tolerated, but 80% of the women have developed amenorrhea; 70%, loss of hair; 30%, cystitis; 30%, conjunctivitis; and 20%, blood platelet counts less than 75,000.

With simple mastectomy alone, it appears that about half of the 24% failures can be salvaged with subsequent surgery or radiation therapy, this in a closely controlled national study, indicating a rationale for delayed treatment.[6] However, there are arguments against the "watchful waiting" approach. In a more typical clinical situation, some patients will be lost to followup. About one-third or more of local recurrences are massive when referred for radiation therapy, due to delay on the part of the patient or referring physician, and are subsequently impossible to control. It is no problem to irradiate peripheral lymphatics in those patients following removal of the breast. It is unlikely that apical axillary nodes or interpectoral nodes will be involved in the presence of

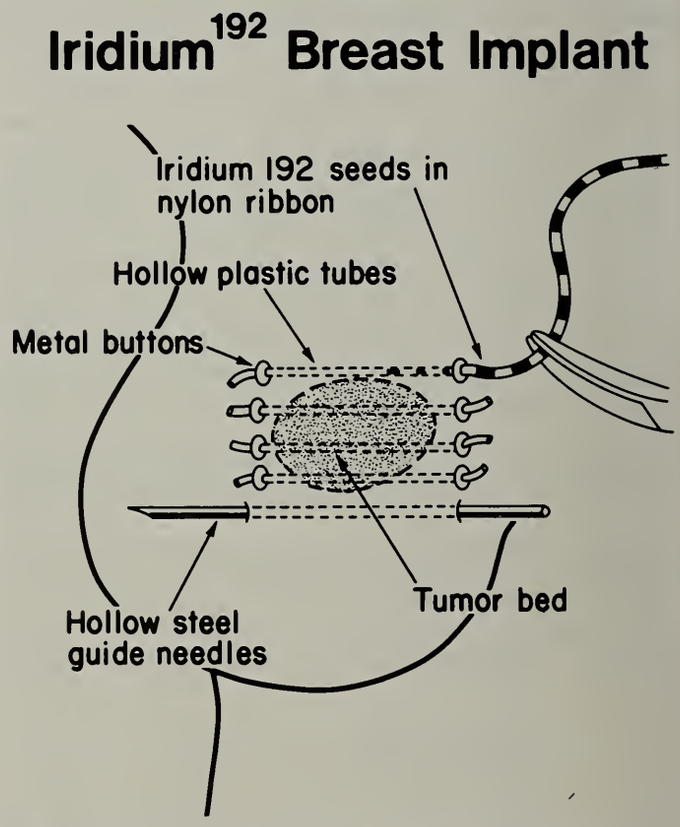


Fig. 1. Iridium 192 "afterloading" breast implant. The radioactive sources are introduced at the bedside, after the actual implant has been carried out under a short general anesthesia in the operating room.

a histologically negative axilla. The psychological trauma of local recurrence and of additional surgery could easily be avoided with postoperative radiation.

WHAT can be concluded from this discussion?

1. Radical mastectomy plus multi-drug chemotherapy in the positive node group appears to be an effective combination to delay early relapse in some.

2. There is good clinical evidence to suggest that local excision and postoperative radiation therapy offers a logical and effective substitute for radical mastectomy in many patients, without increased risk of recurrence.

3. Modified dissection of accessible axillary nodes is mandatory with conservative surgery a) for staging because of the value of adjuvant chemotherapy in the node positive group and b) to remove palpable nodes, if present.

Obviously, additional prospective randomized studies will be necessary to confirm the wisdom of breast conservation. As a practical matter, there has not been a great deal of confidence among most surgeons in this approach. For those who are interested, the following schema is proposed as an alternative to mastectomy:

All patients with lesions measuring less than 3 cm clinically undergo segmental mastectomy and modified axillary node dissection. Each receives 4500-5000 rads to the breast postoperatively. All histologically node-positive patients receive some treatment to the peripheral lymphatics, except those with a lateral lesion and only one to three positive nodes. Patients with central or inner quadrant lesions and a negative axilla receive treatment to the internal mammary chain only. While internal mammary recurrences are low—less than 15%—they represent a delayed, late manifestation of advanced disease and are difficult to control. All other negative node patients require no regional treatment. Chemotherapy is used in all premenopausal patients with histologically positive nodes. The operative site receives a local boost with a direct electron field or an Iridium 192 interstitial implant, with an additional 2000-3000 rads to a limited area. External irradiation of 1000-2000 rads may also be added to the axilla when the nodes are palpable.

Afterloading Iridium 192 implants have become useful adjuncts to therapy in recent years. These are one or two plane implants consisting of linear strands of nylon ribbon which contain tiny radioactive Iridium seeds spaced evenly, one centimeter apart (Fig. 1). The implantation is done in the operating room under general anesthesia with the orderly insertion of, first, needle guides, then nylon tubes in rows traversing the tumor site. It has the advantage of reduced exposure to operating personnel, since the actual radioactive strands are introduced afterwards, in the radiation therapy department or at the bedside. The implant is well tolerated by the patient, who can be up and about in her room during the two- to three-day period. It may be used to boost the tumor bed, as part of the radiotherapy for primary breast cancer, or as a boost to residual tumor following external radiation therapy for an unresectable lesion (Fig. 2A, B).

The presence of locally advanced resectable cancer may increase the risk of local recurrence. Even with adjuvant chemotherapy these patients might still benefit from postoperative radiation to the chest wall and regional nodes, particularly if they have more than two of the following grave signs, or if followup will be difficult (Table 4).

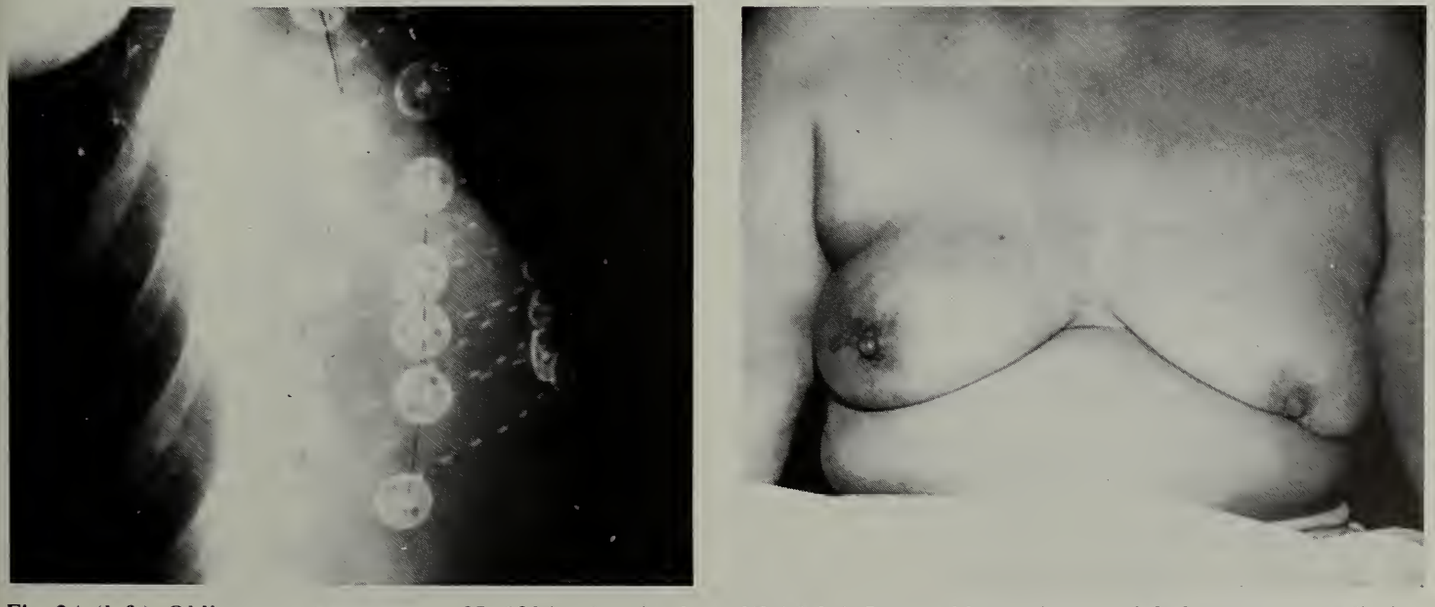


Fig. 2A (left). Oblique roentgenograms of Ir 192 implant in place. 2B (right). Inoperable carcinoma, right breast, post-radiation therapy plus Ir 192 implant.

If adjuvant radiotherapy is to be effective, its advantages must not be offset by complications. The morbidity is minimal with conventional fractionation and with careful titration of the skin reaction.[16] The use of less radical surgical procedures and modern radiotherapy techniques has significantly reduced the problem of lymphedema and radiation-induced chest wall damage.[18] One of the major current objections to radiation therapy is immunosuppression.[20] The evidence concerning immune alterations with breast irradiation is contradictory. Decreased lymphocyte counts have been reported by several authors. Whether depressed lymphocyte counts correlate with immuno-competence of the host is open to question.[1] Depression of the lymphocytes is similar in patients with and without subsequent metastasis.[10] Since radiation therapy decreases local recurrence rates, the site of first recurrence may be distant metastasis, but this must not be construed as the loss of systemic immunity. Furthermore, most failures with adjuvant chemotherapy are due to distant metastasis.[6]

Some reports indicate depletion of the T-cell population; others, the B-cells.[3] Although T-cell mediated response is thought to be primarily involved in antitumor immunity, the interaction between T-cells, B-cells and macrophages is exceedingly complex and incompletely understood at present.[1] Furthermore, lymphocyte identification criteria is sometimes imprecise and subject to interpretation error. Finally, if radiation therapy is immunosuppressive, so must be adjuvant chemotherapy. At this time, the entire subject is too speculative to form the basis for hard treatment decisions.

MANY questions remain to be answered, including:

1. What is enough local treatment for a particular patient?
2. After surgical extirpation, does the patient with a small lesion and only a few positive axillary nodes require any irradiation in addition to chemotherapy?
3. Is simple mastectomy plus axillary node dissection, with delayed radiation therapy or surgery for loco-regional recurrence, the best treatment for the greatest number of patients?
4. Will adjuvant chemotherapy prolong survival or is it merely delaying metastasis due to some benefit obtained via "chemical oophorectomy"?

Only with continued carefully planned cooperative studies can we help to identify the most effective treatment for breast cancer. In the meantime, those involved with the care of these patients must maintain a flexible and informed approach. Those prone to speculate on the preliminary results of recent studies would do well to remember that breast cancer has a long natural history. Years will be required to judge the value of newer modalities.

Table 4. Indications for Postoperative Irradiation, Carcinoma Breast.

1. Primary Tumor:	
	a) >5 cm,
	b) Fixation to pectoral muscle or fascia,
	c) Skin fixation, edema or micro-invasion.
2. Axillary Nodes:	
	a) >25% involved,
	b) Nodes >2 cm,
	c) Capsular invasion.
3. Large central or inner quadrant lesion with positive axilla.	

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CANCER TRENDS COMMENT

This presentation on the role of radiation therapy and the primary treatment of breast cancer represents, as the complete title indicates, "a point of view". Dr. Belgrad's review of the literature and orderly alignment of conclusions is exemplary. I think the article is worthy of close scrutiny at several levels.

The paper points out the most current results with several important studies that deal with adjuvant chemotherapy, emphasizing for us again that adjuvant chemotherapy in conjunction with complete surgical extirpation in breast cancer has been advantageous only for node positive premenopausal patients. It points out also that preliminary results in the carefully controlled National Surgical Adjuvant Breast Project suggest no difference in the failure rate or survival at three years when comparing radical mastectomy with total mastectomy and irradiation or total mastectomy and delayed axillary resection for recurrence in clinical Stage I disease. I would add here that these conclusions reached at three years remain to be reviewed at later periodic intervals to see if they really are comparable avenues of therapy, and Dr. Belgrad surely would agree that the three-year period may not be sufficient time for reaching sound conclusions. He points out that previous careful studies showed no advantage in terms of survival when radiation therapy was combined with total extirpation of tumors, although local and regional recurrences were reduced significantly. He points out that the combination of adjuvant radiotherapy and chemotherapy following extirpation has not yet been tried, and this would seem to me particularly appealing.

Dr. Belgard feels that the trend is toward more conservative therapy and I would surely agree with him in this evaluation. The critical question is "how little can be done without endangering optimal attainable survival?", and this question requires that each step by which the presently acceptable procedures are reduced be prospectively and openly evaluated following the model National Surgical Adjuvant Breast Project Study done to date. Dr. Belgrad gives us good theoretical reason why segmental mastectomy (wide excision) combined with axillary node dissection and breast irradiation may be an appropriate approach. He points out that there is a new national protocol designed to test the value of this approach, and my only plea is that any judgement as to its efficacy, and certainly any application of this technique, be reserved until such careful, prospective, randomized studies are completed and reported upon.

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BOOKS

Cancer Management, edited by WALTER LAWRENCE, JR., MD, and JOSE J. TERZ, MD. 566 pages, illustrated. New York City, Grune & Stratton, 1977.

This book is written by two surgical oncologists with several of their colleagues contributing chapters in certain special areas. The authors have had considerable personal experience in cancer management. In 1966 at the Medical College of Virginia, they were the founding members of one of the first divisions of surgical oncology in a university medical center.

The cancers covered in this book are confined to the "solid tumors." Leukemia and neoplasms of the central nervous system are omitted. The authors felt they were uniquely different from other cancers and their therapy was invariably conducted by specialists in these particular areas.

General guidelines for the management of certain cancers are established and discussed. The book has a surgical bias, but often the general surgeon is the physician who is responsible for the initial plan of therapy of the cancer patient. Some technical aspects of surgical procedures are discussed without going into precise details. A similar approach, utilizing the practical aspects of clinical management, is employed in the chapters on chemotherapy, immunotherapy and radiation therapy.

The book is written in a clear and concise style. A definitive plan of management is set forth for each clinical problem and supported by both personal experience and results from the literature. The tables and figures are clearly presented and easily understood. The bibliography is comprehensive without being tedious.

In the preface of this book, the authors state their objective, "to respond to the clinical management questions that are often raised by the general physician, the general surgeon or the postgraduate trainee in the various specialties." They have performed a real service by fulfilling this objective.

This book will be of real benefit to all physicians who are concerned with the management of patients with cancer.

J. SHELTON HORSLEY, III, MD

Editors' Note: Dr. Walter Lawrence, Jr., who coauthored the book reviewed here, is a member of this journal's Editorial Board and until recently was one of the editors of the Cancer Trends department that is a recurrent feature of this journal.

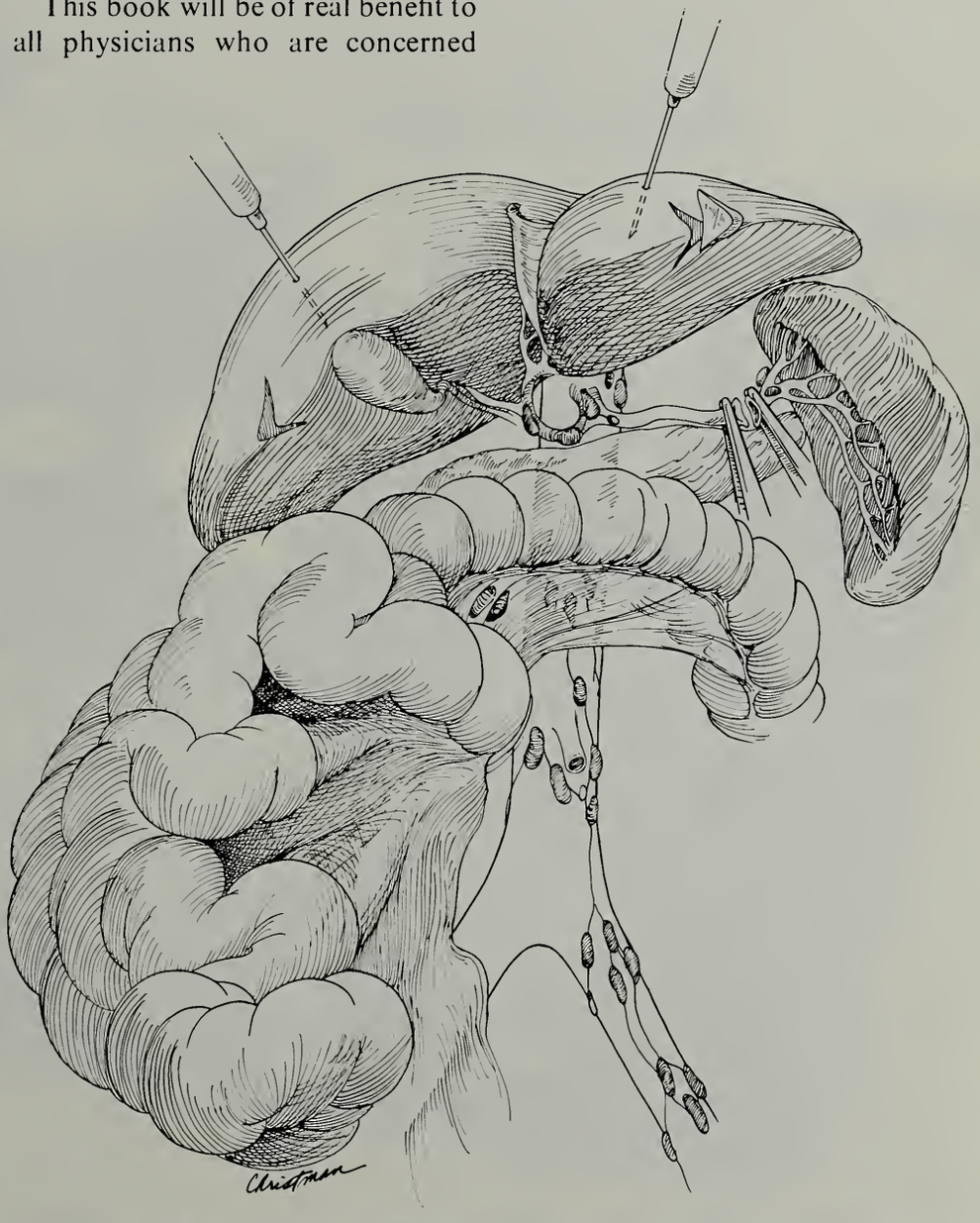
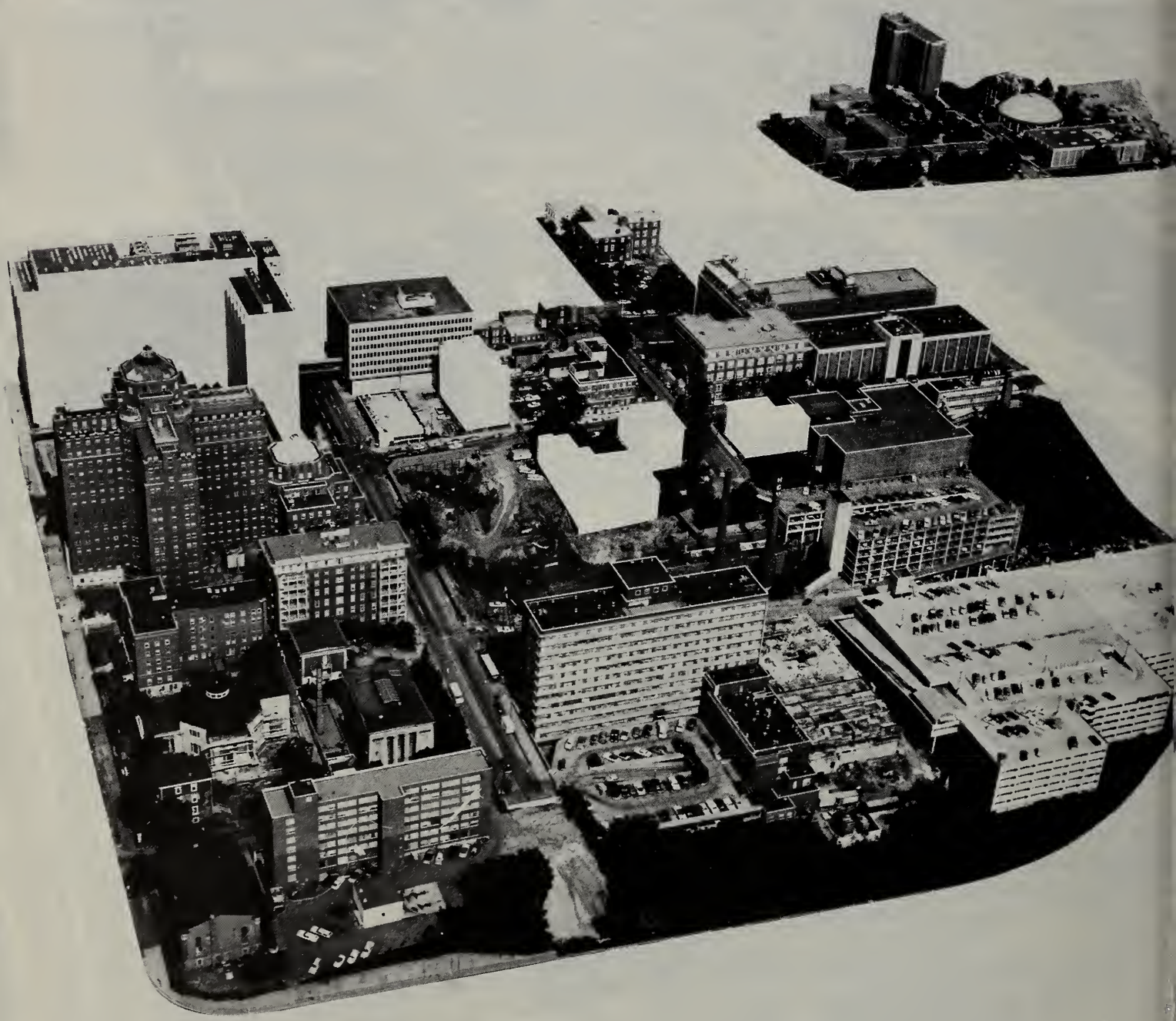


Diagram of the procedure of staging laparotomy for Hodgkin's disease and non-Hodgkins' lymphoma. Sites of the lymph node and liver biopsies are indicated. From *Cancer Management*. Reproduced by permission.

"Now the massive cluster of buildings, enlarging year by year and readily identifiable from almost any vantage point in downtown Richmond, leaves no doubt for native or stranger as to the location of the Medical College of Virginia."

This is a recent aerial view of the Medical College of Virginia campus—a long way from 1838 and the single old rented building shown on page 274. At center may be seen the excavation for the new hospital described on page 276. The vast concrete structures at lower right are parking facilities, said to be the largest in the Southeast. The "islands" within the College complex are, left to right, the Richmond Eye Hospital, the White House and Museum of the Confederacy, and the Richmond Academy of Medicine.



VIRGINIA MEDICAL EDITORIAL

We Salute the Medical College of Virginia

THE February 1977 issue of VIRGINIA MEDICAL featured the School of Medicine of the University of Virginia. This issue features the School of Medicine of the Medical College of Virginia. The order of precedence is appropriate, for age hath its rank and privileges. The University of Virginia Medical School is the older, dating to 1828. The Medical College of Virginia is no Johnny-come-lately, however, for it was founded in 1838 as the Medical Department, in Richmond, of Hampden-Sydney College, itself an elder citizen, though spry and sprightly, started in 1776.

All medical schools have their share of crises and problems. Maybe the Medical College of Virginia has had no more than her share—it just seems that way to those of us close to it. Early on there was the struggle for control between the Hampden-Sydney College trustees and the faculty of its infant Department of Medicine, that led to MCV becoming an independent institution. Then there was the financial plight that led to the state of Virginia bailing it out and taking it over a few years later; the exhausting years of the War Between the States that drained it of men and money; the disheartening postwar years and the Reconstruction era, which included the remarkable quarrel with Gov. William E. Cameron of the readjustor regime; the implications of the Flexner Report; the stress of the merger with the University College of Medicine; the growth pangs associated with a developing full-time faculty and a modern physical plant; the tensions and problems resulting from the joining of the Medical College of Virginia and the Richmond Professional Institute to form Virginia Commonwealth University; the unsettling effect of the vagaries of human nature all too often exhibited by students, faculty, and administrators; the disruption resulting from recurring town-gown differences; the impact of the increasingly active role of government in medical education; and always money, money, money—the lack of it, that is. The list could be amplified and lengthened almost without end. Indeed, the full MCV story rivals the perils of the fictional Pauline in her alarming situations and dramatic rescues. Yet, like Pauline, the School of Medicine has remained steadfast, true to its mission, and triumphant over adversity.

It was the only medical school in the Confederacy to graduate a class during each of the War years. It organized and staffed army general hospitals in World Wars I and II that rendered valiant service to sick and wounded soliders. It provided for many years the clinical schooling for transfer students from two-year medical schools, particularly those of our neighboring states of North Carolina and West Virginia. It has furnished more practitioners of medicine to this state than any other single school.

The Medical College of Virginia has been blessed by heroes who have risen up in times of greatest stress. The hero I knew best, and the one who may have contributed more to the School than any other individual, was William T. Sanger, native Virginian and distinguished educator, who was president from 1925 to 1956. College budget directors, note: his starting salary was $7,000. Ironically, his introduction to the School was less than auspicious—indeed, it was quite controversial, for Dr. Sanger's doctorate

degree was a PhD, not the MD degree which many vocal friends, enemies, and bystanders considered an essential qualification if the job were to be done properly.

The test of time has shown clearly that Dr. Sanger was the man for the job, for it was he who started MCV on the long and arduous road to becoming the first-rate, modern-day educational institution that it is today. He combined the best features of statesman, politician, beggar, scholar, and administrator; and he had the optimism, courage, and energy to solve the problems facing him.

The Medical College of Virginia has always been a fine school, and its graduates, well-trained and competent, always were prepared to undertake any kind of medical work. A look at the accomplishments of its alumni and alumnae shows this to be so. But, in 1925 the School was heavily in debt and not clearly recognized as a state-supported institution. Even more serious, its accreditation was in jeopardy because of inadequate physical plant, paucity of faculty, and financial straits. All of the classrooms and laboratories were in McGuire Hall and the Egyptian Building. Both were old, and the Egyptian Building, considered to be superb in 1845, was clearly unsafe for human use. The outpatient department was housed in the dilapidated Virginia Hospital, now razed, which adjoined McGuire Hall. The teaching hospitals were Memorial, circa 1900, and Dooley and St. Philip, built in 1920 but seeming older than Memorial.

The full-time faculty consisted of a handful of dedicated and able teachers in the basic sciences who worked diligently and effectively, but there was not a single whole-time clinical faculty member. The storm that erupted when Dr. William Branch Porter was named the Professor of Medicine and brought to the school in 1928 as the first full-time member of the clinical faculty was spectacular. It took rare courage and strength of character for Dr. Sanger to press on with enlarging the faculty. By 1930 Dr. Lee E. Sutton, Jr., was professor of pediatrics and dean, then a part-time job; Dr. Isaac A. Bigger was professor of surgery, and later Dr. H. Hudnall Ware, Jr., became professor of obstetrics-gynecology.

My first contact with the Medical College of Virginia was in the Fall of 1934 when I stepped off a Ginter Park bus at Tenth and Broad Streets and began a search for McGuire Hall, where I was to report to the office of the treasurer, Mr. J. R. McCauley, pay my tuition fee, and enroll for classes. The search was successfully completed, but not without difficulty. The man on the street—at least the one I accosted at Twelfth and Broad Streets—had never heard of McGuire Hall; but he did identify Memorial Hospital, just over his shoulder, as "the Medical College". Although I had lived in Richmond since 1920, this was the only MCV building that I, too, could identify. Now the massive cluster of buildings, enlarging year by year and readily identifiable from almost any vantage point in downtown Richmond, leaves no doubt for native or stranger as to the location of the Medical College of Virginia.

A Rip Van Winkle waking today at Twelfth and Broad Streets in Richmond would not believe his senses. He would see well-equipped, modern buildings stretching from Broad Street and Tenth Street on the south and west to the expressway on the north and east, and a construction for a mammoth new hospital underway. He would meet a large number of highly qualified faculty members in every department. He would find a large, competent student body made up of undergraduate and graduate students, housestaff and fellows.

Now well into its second hundred years of existence, the School of Medicine of the Medical College of Virginia, the Health Sciences Division of Virginia Commonwealth University, has every right to look back on its accomplishments with pride and satisfaction, and to look to the future with confidence. We salute and thank you, MCV, for all your have done for, and for all that you have meant to, countless patients, students, and friends.

Eastern Virginia Medical School, get ready. Next year it will be your turn to tell us about yourself and to exhibit excellence by the quality of papers submitted to VIRGINIA MEDICAL.

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For their patient cooperation in providing the pictures for this issue, the Editors thank David R. Mathis and William T. VanPelt, of the VCU Office of University Relations; Melvin C. Shaffer and Donald A. Pleasants, of the Department of Visual Education, MCV-VCU; and Nancy Summers, of the Medical Campus Archives.

The Great Preventive Life-Style Cop-Out

Two of the words in the above title are current jargon—"life-style" is a medico-social term and "cop-out" is a post-hippie epithet. Add the title's three preceding words and we have one of medicine's biggest-ever do-it-yourself boondoggles.

Modern preventive medicine began in the 1840's with the Great Sanitary Awakening—the control of disease through community action. Strictly speaking, this was public health and concentrated on the environment, but individual prevention soon followed with the advent of immunization, a service controlled by physicians. What is being suggested today is that further advances in disease prevention depend on each person's willingness to control his or her bad habits; we are told that if we stop smoking and drinking, and eat less and exercise more, we will add years to our lives. Implicit in this assumption is the belief that we can change what we have been doing in the past; what will make us change is not explained—except in vague terms like health education, prospective or predictive medicine, health hazard appraisal and health activation.

The great advances in disease control in the past century have been made by having something done *to*, not *by*, each person. In the Western world, community action and legislation have eliminated cholera and typhoid through the sanitary disposal of sewage, and the provision of clean water, food, and milk. Immunization has been supported to a lesser extent by legislation but it has been aimed at children, where the parents assume the role of the legislative body; hence the successful control of smallpox, diphtheria and poliomyelitis. The point again is that, adult or child, sewage or smallpox, no one had any choice in the matter of prevention; but we, the people, are suddenly to become our own prevention units and must stand or fall on our willingness to stop doing what we enjoy, because medical science can't find any other answer to it. This, I say, is today's great preventive life-style cop-out.

Before we start feeling guilty about not being admirable abstainers, why don't we use some community muscle and prevent a vast amount of illness and death that doesn't reflect our personal whims? Some 50,000 people killed themselves or someone else last year—mostly with handguns. But do we try to control the sale of firearms or promote stringent licensing laws? Not on your nelly! Why? Because the founding fathers of this country, faced with hostile Indians and black bears, decreed that we had a "right to bear arms"! The highway toll of another 50,000 lives could be drastically reduced by a built-in mechanism that forces drivers to buckle their seat belts before turning the ignition key, and perhaps by requiring an air bag in every car. Do we support these moves? Never! Why? Because they are contrary to the right of each individual to harm himself if he wishes to do so! The freedom of the individual is sacred and never mind about the other unfortunate victims—sarcasm perhaps, but true.

Switching to *we*, the physicians, what do *we* do about all this? We mince genteel mealymouthed words about life-styles and how we must change them although no one seems to know how to do it; but at least we can say to our patients, "It's all your fault—I can't do it for you." Comfortable for us, yes, but how many of us practice what we preach? Why, then, should our patients believe us—even if we are convinced that this life-style kick is true; and I must say I question the scientific validity of many of the suggested remedies. This does not mean that we should ignore health education but let's put first things first.

Another component of most prevention programs is the advice to stop worrying, thereby eliminating, or reducing, stress. When I was a general practitioner, I used to reassure my patients by telling them not to worry until, one day, I realized what an idiotic platitude I was handing them. Stress is a convenient label to hang on diseases of unknown cause—but we'd soon discard it if we had something specific to replace it, just as we forgot about miasmata when pathogenic bacteria were discovered. The fact is that we don't know the causal mechanisms of most chronic diseases, but our patients think we do and many of us pretend we do, too. Everyone, including doctors, wants an explanation for the occurrence of disease so we provide it.

It is a sobering exercise to read the textbooks of one hundred years ago. Most of what is written there is conjecture based on human observation; unfortunately too much of it has been replaced by today's equally unfounded dogma based on rodent research. I hope that in 2077 our descendants will be able to write text books based on verified, valid scientific data; they will no doubt read our texts with the same tolerant, patronizing eye with which we now read those of the era before the germ theory.

To get back to our life-styles: there is an anecdote of the way two men dealt with a power shortage in a large office building. One went around placing a card on each desk which said, "Save a Watt—Conserve Electricity"; the other replaced the 100-watt bulbs with 60-watt bulbs. Point made and, I hope, taken with humility and sweet reasonableness.

F. J. Spencer, MD

VIRGINIA MEDICAL OBITUARY

Clarence Chewning, Jr., MD

Dr. Clarence Conway Chewning, Jr., Richmond proctologist, died February 15 in a Richmond hospital at the age of 66. Dr. Chewning was a graduate of the University of Richmond and the Medical College of Virginia. During World War II he served with the 168th General Hospital in France. He was a member of the Richmond Academy of Medicine, The Medical Society of Virginia, and the Piedmont Society of Colon and Rectal Surgeons and was a fellow of the American Medical Association and the American Society of Colon and Rectal Surgery.

F. Wilson Gearing, Sr., MD

Frank Wilson Gearing, Sr., a member of The Medical Society of Virginia for 51 years, died January 23 at his home in Woodstock, Virginia. He was 86 years old.

Dr. Gearing was educated at the University of Virginia and Randolph-Macon College, earned his medical degree at the Medical College of Virginia, and served Woodstock for 52 years as a general practitioner. He was a member of the staff of Shenandoah County Memorial Hospital, a member and administrator of Woodstock United Methodist Church, and was a charter and honorary member of the Woodstock Rotary Club. One of the two sons who survive him is a physician: Dr. Frank W. Gearing, Jr., Harrisonburg.

Irwin Rifkin, MD

Dr. Irwin Rifkin, Richmond, who received his certificate of 50-year Club membership at The Medical Society of Virginia's annual meeting last year, died February 12. He was 77 years old.

A general practitioner, Dr. Rifkin was educated in Richmond, graduating from the University of Richmond and the Medical College of Virginia. He was a physician for the American Tobacco Company before his retirement late last year, had been physician for the Eagles Club since 1932, and generously volunteered his services to the Beth Sholom Home in Richmond. In addition to The Medical Society of Virginia, Dr. Rifkin belonged to the Richmond, Virginia, and American Academies of Family Practice.

Walter M. Moore III, MD

At the age of 44 years, Dr. Walter Merritt Moore III, Norfolk, died February 5. Dr. Moore's specialty was pathology, and he was a graduate of the University of Virginia. He belonged to both The Medical Society of Virginia and the American Medical Association.

Wilbur A. Hamman, MD

Dr. Wilbur Albert Hamman, Arlington, died January 8 at the age of 49 years. He was a graduate of the Pritzker School of Medicine of the University of Chicago and was a psychiatrist.

John H. Charles, MD

Dr. John J. Charles, who had in recent years practiced psychiatry in West Palm Beach, Florida, died at his home there on December 24, 1977, of cardiac arrest. He was 54 years old. Dr. Charles had previously practiced surgery in Clifton Forge, Virginia. He was a member of The Medical Society of Virginia, the American Medical Association, the American Psychiatric Society, and the Palm Beach County Medical Society and was a Fellow of the American College of Surgeons.

William P. Moore, Jr., MD

Dr. William P. Moore, Jr., general practitioner in Norfolk, died January 12 at the age of 73. Dr. Moore was a graduate of the University of Virginia School of Medicine and had been a member of The Medical Society of Virginia for 40 years.

Daniel Gabriel, MD

Dr. Daniel Gabriel, Pennington Gap, died December 21, 1977, at the age of 66. Dr. Gabriel was a general practitioner and had earned his medical degree at the Kansas City University of Physicians and Surgeons.

WHO'S WHO IN VIRGINIA MEDICINE

Mastership in the American College of Physicians is to be conferred this month on Dr. **W. T. Thompson, Jr.,** *Richmond,* at ceremonies during the College's 59th annual session in Boston. Out of a membership of 40,000 specialists in internal medicine and related areas, nine physicians are to receive the honor this year for their contributions to the advancement of the science and practice of medicine. Dr. Thompson was chairman of the Department of Medicine of the Medical College of Virginia from 1959 to 1973. He is Editor of VIRGINIA MEDICAL.

In the 50 years that Masters have been elected by the College, seven Virginia physicians have received the honor. They are **Charles M. Caravati, Sr.,** MD, *Richmond;* **Kinloch Nelson,** MD, *Richmond;* Harry F. Dowling, MD, *Great Falls;* the late **James Morrison Hutcheson,** MD, *Richmond;* the late **Walter B. Martin, MD,** *Norfolk;* the late Franklin M. Hanger, MD, *Staunton*; and the late **Henry B. Mulholland, MD,** *Charlottesville.*

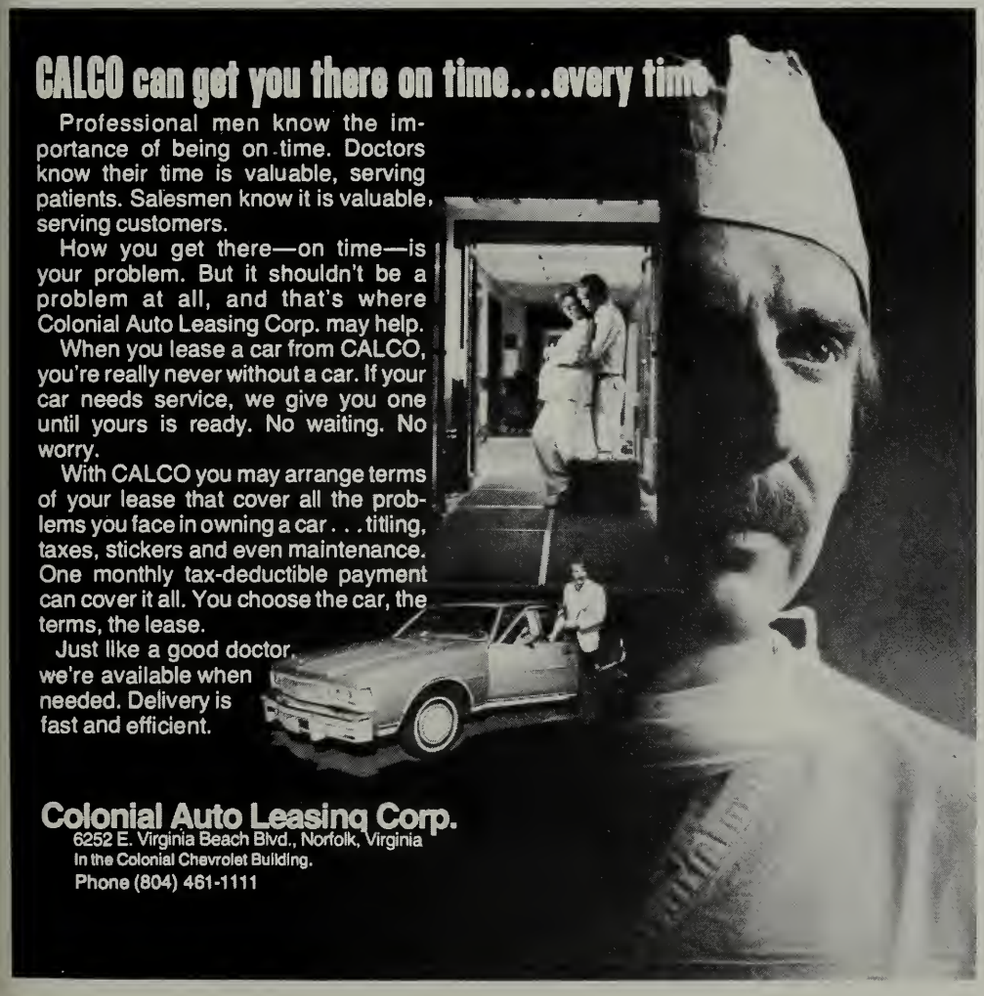
New chairman of MCV's department of ophthalmology is Dr. Andrew P. Ferry, former professor of ophthalmology at the Mount Sinai Medical School, City University of New York. Dr. Ferry received his medical degree from Georgetown University. He is president of the Verhoeff Society, national organization of ophthalmic pathologists.

Dr. Robert O. Friedel is the newly-appointed chairman of the psychiatry department at the Medical College of Virginia. He comes to Richmond from the University of Washington School of Medicine, Seattle.

The New York Academy of Sciences has elected to Fellowship Dr. **William R. Regelson**, professor of medical oncology and microbiology at the Medical College of Virginia.

Dr. **Frederick J. Spencer**, professor and chairman of preventive medicine at MCV-VCU, *Richmond*, has been named assistant dean for student activities, and Dr. **Albert J. Wasserman**, professor and chairman of the clinical pharmacology division at the medical school, has been named assistant dean for curriculum. Both men are writers of distinction. Dr. Wasserman sits on several medical journal editorial boards, is co-editor of *Therapeutic Notes*, and was named Teacher of the Year by the 1977 MCV class. Dr. Spencer has been widely published in professional journals, is editor of the *MCV Quarterly* medical journal, and has served on the Editorial Board of this journal; he is the author of the editorial, "The Great Preventive Life-Style Cop-Out," in this issue.

A call from the Library of Congress to this journal's office asked for a copy of VIRGINIA MEDICAL's January issue, this to fill a request from "a congressional office." Which congressional office wanted the issue the Library's spokesman could not reveal, but he did say the articles sought for reading were the "Up Front" commentary on federal regulations by Dr. **William J. Hagood, Jr.,** MSV President, and the group of six editorials that discussed the cost of medical care today.



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Letter from the President:

Clearly the cost of health care and the doctor's role in spending health care dollars is an issue of tremendous concern to the people of Virginia and this nation. A recent state-wide survey showed three out of four Virginians believe that health costs are too high even when inflation and improved technology are taken into consideration. And two of three persons interviewed said they believe doctors have a "great effect" on the cost of health care. In addition, stories on rising costs appear regularly in the media, some of our Health Systems Agencies are attempting to set fees for hospital-based physicians, and the public demand for quality care continues to grow.

Today your Society is active on many fronts to find appropriate ways to contain costs. A joint committee of the Society and the Virginia Hospital Association is now reviewing the 48 recommendations of the National Commission on the Cost of Medical Care and considering the 15-point cost containment program of the American Hospital Association. We also expect to be involved in the state study of health care costs in the near future. Meanwhile, cost containment endeavors by health planning agencies have not escaped notice.

While each of these efforts is important, I personally have some doubts that any will produce solutions of lasting worth unless some very fundamental changes also occur.

One of these changes involves our own attitudes, and the way the public perceives us as physicians, on health care costs. The results of the recent statewide survey cited above are disturbing although not inexplicable. From our first day in medical school we have been trained that practicing high quality medicine must be our paramount concern. Until recently, for most of us cost consideration was never the major

factor because if the patient was unable to pay, we donated our services and hospitals absorbed losses.

Today this is less and less the case. Medicare, Medicaid and private health insurance programs have added a whole new and often costly dimension to medical care and are assuming a greater and greater portion of costs. Such programs have created greater access to care, which has been accompanied by increased public demand, from all income groups for more frequent, more extensive and often more expensive treatment. Changes have also brought about new guidelines, regulations, and bureaucracies, all of which add to the problem.

The second fundamental change needed is the public's attitude toward care. In the past, because most people knew a visit to the doctor's office meant some financial obligation, many limited visits to instances when they felt the need was truly real. However, when government and private carriers started picking up a greater share, this sense of obligation began to fade. And the sense continued to diminish and office visits increased as politicians and government planners began talking about health care as a Constitutional or God-given right.

The medical profession must and will continue practicing quality medicine.

However, while continuing to provide quality care to patients, we must look for new ways to eliminate unnecessary costs.

We also have to start talking more about costs with our patients so they get a better understanding of the relationship between excessive use and costs. Certainly cost must not be the overriding factor in a patient's decision to obtain care, but all patients must realize insurance-covered care is not free. Virginians pay for this with higher taxes and insurance premiums.

Increasing understanding of this issue isn't something we can do alone. If Uncle Sam is really interested, he also must help Americans see the benefits of changing their habits and let them pay a little more of out-of-pocket expense for care.

One way or another the current trend of escalating cost must be slowed. I believe it can be done through

The Medical Society of Virginia

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Falls Church

initiatives within the private sector. However, I have no doubt that unless strong initiatives are taken voluntarily very soon, the trend will be slowed by federal mandate. As physicians, we must not overlook our own role and responsibilities. We must take part in the open discussion of problems and work to help bring about the right changes.

William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

MEDICINE AND THE LAW:

New Prescriptions Forms Required for Voluntary Formulary

In 1976 the General Assembly adopted legislation establishing a Virginia voluntary formulary under the control of a Virginia Voluntary Formulary Advisory Board. The Board is responsible for preparing a list of drugs to be included in the voluntary formulary. Use of the voluntary formulary is left to the discretion of each physician. At the present time a prescriber may elect to use the formulary by writing on the prescription "Voluntary Formulary" or "VF."

As a result of amendments adopted in 1977, the following new rules must be followed beginning January 1, 1979:

- All printed prescription forms must provide two lines for the prescriber's signature. Alongside the first line (positioned on the left side of the prescription blank) should be printed the words "voluntary formulary permitted". Alongside the second signature line (positioned on the right hand side) should be printed the words "dispense as written". By signing the appropriate signature line the prescriber will indicate his dispensing instruction to the pharmacist.
- In case of an oral prescription, the prescriber's oral dispensing instructions must be followed. If the pharmacist dispenses a drug product other than the brand name prescribed, he must advise the purchaser to this effect and indicate on his permanent record and, unless otherwise directed by the prescriber, on the prescription label the brand name (or, in the case of a generic drug product, the name of the manufacturer or distributor and the lot number of the substituted drug product).
- The law further provides that when a pharmacist dispenses a drug product pursuant to the voluntary formulary, it shall be dispensed at a lower retail price than that of the drug product prescribed. The difference between the acquisition cost to the pharmacist of the drug product dispensed and the drug product prescribed must be passed on to the consumer.

This information was prepared by Allen C. Goolsby, III, The Medical Society of Virginia's attorney.

Librax®
Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

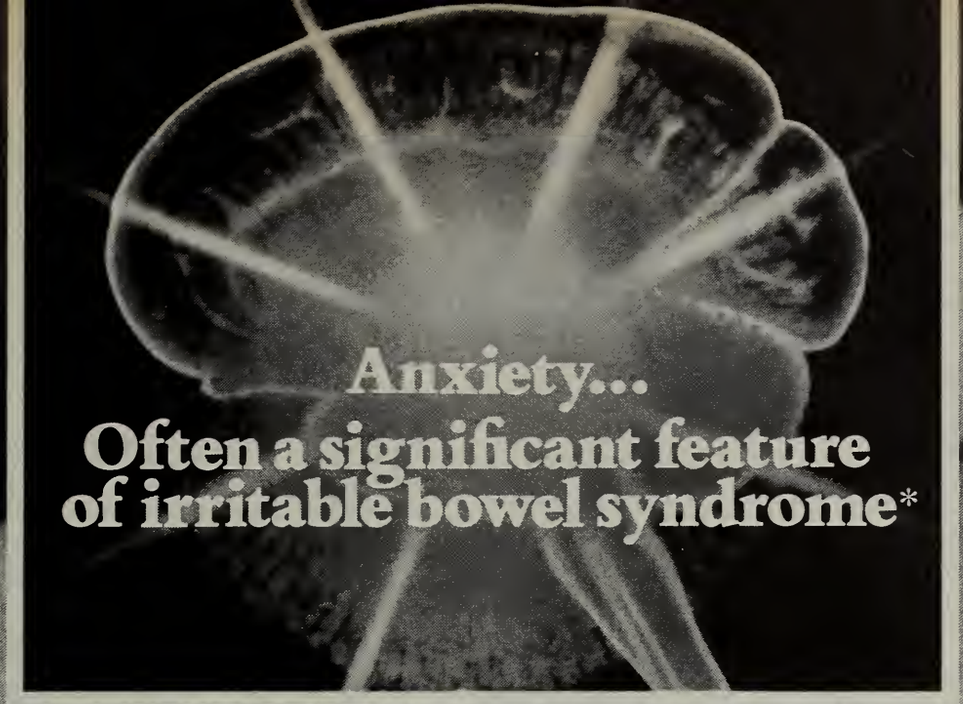
***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

ROCHE
Roche Products Inc.
Manati, Puerto Rico 00701



Anxiety... Often a significant feature of irritable bowel syndrome*

The action of Librium®
(chlordiazepoxide HCl)

A significant advantage of adjunctive

Librax®

Each capsule contains
5 mg chlordiazepoxide HCl and
2.5 mg clidinium Br.

Antianxiety
Antisecretory
Antispasmodic

Librax is unique among G.I. medications in providing the specific antianxiety action of Librium® (chlordiazepoxide HCl) as well as the potent antisecretory and antispasmodic actions of Quarzan® (clidinium Br) for adjunctive therapy of irritable bowel syndrome* and duodenal ulcer.

*Librax has been evaluated as possibly effective for this indication.
Please see brief summary of prescribing information on following page.

ROCHE

LETTERS

Virginia Journal Is "Warm Link with Home"

It was pleasant to read the editorial, "Va Med Travels Around the World", in the November issue[1]. Korea was listed as receiving two subscriptions. Dr. Robert Patten, who used to practice in Roanoke, Virginia, was here with his wife yesterday for a visit with us, and he and I agreed that we are the recipients of the two subscriptions. We also agreed on how pleasant it is to receive VIRGINIA MEDICAL, and thus keep in touch, in some measure at least, with medical happenings in the state of Virginia and the progress of our friends.

Dr. Patten is currently practicing in a rural clinic on the island of Koje Do, off the coast of Pusan, Korea. His work is done under the most primitive conditions. I myself continue here at the Kwangju Christian Hospital practicing general surgery but gravitating more and more to the surgery of pulmonary tuberculosis, for which there are many candidates here. In addition, much time is spent in the guiding and teaching of the surgical resident staff.

Working here in Korea, both Dr. Patten and I regard VIRGINIA MEDICAL as a warm link with home.

R. B. Dietrick, MD

Kwangju Christian Hospital
PO Box 70
Kwangju, Chulla Namdo, Korea 500

P.S. Since the above was dictated I have received a visit from Dr. Chuck Marshall, formerly of Martinsville, who now practices ob-gyn at the Presbyterian Medical Center in Chŏngju. He is the newest member of our Virginia Group in Korea, having arrived in December. Your number of subscriptions should be three!

1. Va Med Travels Around the World. Va Med 104:805, 1977

Information or Confidentiality?

I enjoyed reading the editorial by Dr. Robert A. Reid[1], and, in addition to being astounded by the fact that there may be a "bubble" memory as small as a 50¢-piece that could accommodate all of the information in the Library of Congress, I am a little puzzled as to what Doctor Reed is actually suggesting in the way of what should be done. It seems quite clear that a medical chart could be constructed from the data on computers, and it seems equally clear to me that, if the data is in computer language, it will be accessible to someone who has no business with it. Consequently, the argument regarding confidentiality to me comes down to this: either the computer will not have the information or we will have no confidentiality.

We have been hopeful of stopping personally identifiable information at the PSRO Center in Charlottesville, but, since hospitals send so much information to computer banks, I find it difficult to continue to persuade myself that this is confidential.

Robert L. A. Keeley, MD,
President,
Virginia PSRO Support Center
1234 Franklin Road, SW
Roanoke VA 24016

1. Reid RA: Will the PSRO data system be an effective clinical record? Va Med 105:241, 1978

Praise for Doctor Hagood's Stand on Regulations

Doctor Hagood's message in the January issue, "A Litany of Proposed Federal Legislation",[1] was splendid. All of it needed to be said, and he said it well and right on target. I compliment him on the very fine manner in which he reacted by forming the Vanguard Committee. I have been much troubled by HSA, but his strong stand offers me a welcome measure of comfort. I am sure that every doctor in Virginia is grateful to him for his appropriate reaction to this problem.

Alexander McCausland, MD

609 South Jefferson Street
Roanoke VA 24011

1. Hagood WJjr: A litany of proposed federal legislation. Va Med 105:2-3, 1978

I read with interest in the January issue Doctor Hagood's remarks on Public Law 93-641, by which Congress established the Health Systems Agencies. For the past year the Virginia Pediatric Society's Child Health Plan Development Committee, of which I am chairman, has been seeking HSA support

for the health care needs of children. We have been working actively within each local HSA, as well as on a state-wide basis, and so we are acutely aware of the problems the medical profession now faces. On behalf of that Committee I commend Doctor Hagood for his action in establishing the Vanguard Committee. We stand ready to assist it at any time and in any way appropriate.

Joseph R. Zanga, MD
University of Virginia Medical Center
Charlottesville VA 22901

Questions the Wisdom Of a Journal Ad

I am a new pediatrician in Marion and am a new member of The Medical Society of Virginia. There is a great need here in Southwest Virginia for physicians of all specialties. In Marion alone we need one or two obstetrician-gynecologists and an ophthalmologist; we are also searching for a urologist. I was therefore most unhappy to see an advertisement seeking family practice and ob-gyn physicians for Lake City, South Carolina, in the "Virginia Medical Classified" section of the December, 1977, issue. If this journal is truly "The Monthly Publication of The Medical Society of Virginia", why are you trying to entice physicians to South Carolina? The Society should encourage physicians who are seeking a change in location to look elsewhere in Virginia, rather than to look out of the state.

Robert H. Guinter, MD
Radio Hill Road
Marion VA 24354

Editors Note: MSV members with whom the Editors have shared the message in this letter have been highly sympathetic to Doctor Guinter's concern. One said, "Doctor Guinter has a salient and very pragmatic point." The majority was unwilling, however, to advocate prohibition of such advertising. One said, "If there are those so dissatisfied that they will leave us on the basis of such an ad, then they will not be happy here in any event." More than one pointed out that we also publish the classified ads of physicians in other states seeking positions in Virginia; indeed, the April issue carried two classified ads from out-of-state physicians seeking positions in Virginia. Several doctors noted that medical journals over the country publish both kinds of ads routinely.

One member of the Editorial Board admonished: "VIRGINIA MEDICAL should stress the opportunities for physicians to practice in Virginia." And so it should, and so it shall. For instance, beginning right now the journal will publish as frequently as space permits the box you see at the bottom of this page.

A "Special Place" For Doctor Cox

The following letter was published in the Lynchburg News of February 19 and is reprinted by permission.

Dr. Robert H. Cox Jr. had a very special place in the hearts of my family. We have a son 11 years old and a daughter six years old. He was our pediatrician for 10 years and stood by us as a friend and doctor when the children were sick, had minor surgery, and ordinary childhood diseases. We always had complete confidence in his decisions.

On several weekends we went to his house when our children needed a doctor. This was more convenient than meeting elsewhere, and he made us very welcome as he examined our child. He even took time to show his dogs and horses to our children.

Dr. Cox had a morning hour, except for Wednesdays when you could call his house to discuss whatever concern you might have for your children's health and happiness. This was very unusual. Through all this we could tell he really cared.

His death has been a great loss to us personally and we think Lynchburg and area residents have lost one of our best pediatricians.

Clark and Marie Rogers
Route 2 Lynchburg, Virginia

Virginia is for doctors. ♥
Looking for a great place to locate?
Want to make a change? Need an associate?
Write or call the physician referral service of the Virginia Council on Health and Medical Care.
Post Office Box 12363, Richmond, VA 23241, 804 649-0323.
The Council is supported in part by The Medical Society of Virginia.

Renal Tubular Acidosis, Bartter's Syndrome, Chronic Renal Failure, Hypophosphatemic Rickets

Children with growth failure secondary to the above may achieve improved growth velocities under treatment of the active metabolite of vitamin D, i.e., 1,25 dihydroxy-vitamin D_3, which is available through the Division of Pediatric Nephrology, Medical College of Virginia. Physicians wishing to refer their patients for such treatment should address James C. M. Chan, MD, Box 822, MCV Station, Richmond VA 23298 or call 804 770-3705.

ASPEN MUSHROOM CONFERENCE

Identification of edible, poisonous, and hallucinogenic mushrooms. Treatment of mushroom poisoning. Microscopy. Novice and advanced courses. AMA Category I. August 13-18, 1978. Wildwood Inn, Snowmass-at-Aspen, Colorado. Contact Beth Israel Hospital, 1601 Lowell Blvd., Denver CO 80204, 303 825-2190 Ext. 359.

The Second Annual G. Slaughter Fitz-Hugh Symposium: HEAD AND NECK TRAUMA

Guest speakers: Byron Bailey, Leslie Bernstein, John Dickinson, and Eugene Meyers.
Tuition: Practitioners, $200; Residents/Military, $100.
CME Credit: 16 Hours.

Send inquiries to Department of Otolaryngology/Maxillofacial Surgery, University of Virginia Medical Center, Charlottesville, Virginia 22901.

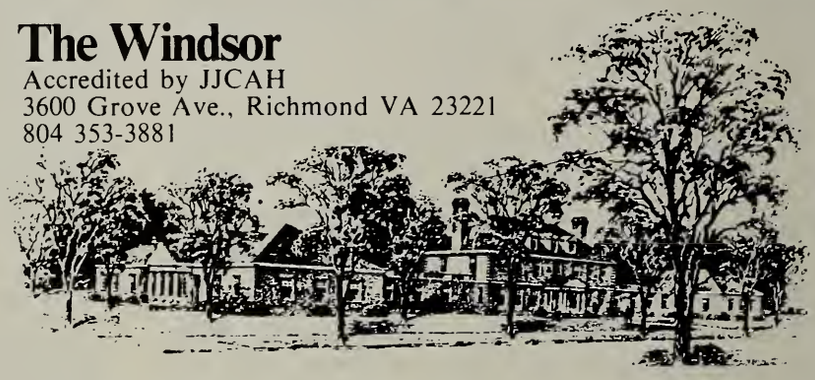
June 8-11, 1978, Charlottesville



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804 353-3881



Mrs. Plyler's

Residential Care
1615 Grove Ave., Richmond VA 23220
804 353-3981





University Park

New in 1978
Pemberton at Three Chopt Rds., Richmond VA 23229
804 747-9200

MEETINGS ABOUT MEDICINE

May

Annual Spring Forum for Child **Psychiatry**, sponsored by MCV Division of Child Psychiatry, and the Virginia Treatment Center for Children, *Richmond*, May 19. Dept. of CME, Box 91, MCV Station, Richmond 23298, 804 770-8207.

Clinical **Rheumatology** for the Practicing Physician, presented by the Virginia Chapter of the Arthritis Foundation, Medical College of Virginia, University of Virginia School of Medicine, and Eastern Virginia Medical School, Bonhomme Richard Inn, *Williamsburg,* May 19-20. Virginia Chapter of the Arthritis Foundation, PO Box 5069, Richmond 23220, 804 353-4471.

June

The Child and Adolescent with Spinal Cord Injury, sponsored by the **Children's Rehabilitation** Center and Division of CME, University of Virginia, *Charlottesville,* June 1. Anne Raynor, Conference Coordinator, 804 924-5161.

Rehabilitation of the Traumatic Brain-Injured Adult, sponsored by the Medical College of Virginia, Hyatt House, *Richmond,* June 8-10. Ms. P. Reams, Dept. of CME, Box 91, MCV Station, Richmond VA 23298.

Head and Neck Trauma, Second Annual G. Slaughter Fitz-Hugh Symposium, *Charlottesville,* June 8-11. Dept. of **Otolaryngology/Maxillofacial Surgery,** University of Virginia Medical Center, Charlottesville 22901.

Current **Drug Use in Pregnancy,** sponsored by the Johns Hopkins Medical Institutions, Cross Keys Inn, *Baltimore,* June 16-17. Office of Continuing Education, 720 Rutland Avenue, Baltimore MD 21205, or call 301 955-5880.

Clinical **Pharmacology** for Physicians: a Contemporary Review of Rational Drug Use, sponsored by the Johns Hopkins School of Medicine, *Baltimore,* June 19-20. Course Coordinator, Room 17, Turner, 720 Rutland Ave., Baltimore, MD 21205, 301 955-5880.

The Art and Science of **Sports Medicine,** sponsored by the Division of Sports Medicine, University of Virginia, *Charlottesville,* June 21-24. Dr. Frank C. McCue, III, University of Virginia Hospital, Charlottesville VA 22903.

July

Cardiac Symptoms and Arrhythmias—Their Diagnosis and Treatment, sponsored by International Medical Education Corporation, Hospitality House, *Williamsburg,* July 14-16. IMEC, 64 Inverness Drive East, Englewood CO 80110, 800 525-8646 toll free.

International **Automotive-Medical** Meeting, sponsored by American Association for Automotive Medicine and the International Association for Accident and Traffic Medicine, University of Michigan, *Ann Arbor, Michigan,* July 10-15. Lee N. Hames, 535 North Dearborn Street, Chicago IL 60610, 312 751-6585.

Pediatric and Adolescent Endocrinology and Metabolism, sponsored by Dept. of Pediatrics, University of Virginia School of Medicine, *Charlottesville,* July 31-August 4. Ms. Peggy Denby, Box 386, UVA School of Medicine, Charlottesville 22901.

August

Coronary Disease, Exercise Testing, and **Cardiac** Rehabilitation, sponsored by International Medical Education Corporation, Hospitality House, *Williamsburg,* August 4-6. IMEC, 64 Inverness Drive East, Englewood CO 80110, 800 525-8646 toll free.

Aspen **Mushroom** Conference, Wildwood Inn, *Snowmass-at-Aspen, Colorado,* August 13-18. Emanuel Salzman, MD, Beth Israel Hospital, 1601 Lowell Blvd., Denver CO 80204.

American Medical Association
Annual Convention, June 17-22, *St. Louis*
Interim Convention, Dec. 2-6, *Chicago*
Scientific Meeting, Dec. 7-10, *Las Vegas*

FELLOWSHIP HALL



TREATMENT AND LEARNING CENTER For

ALCOHOL RELATED PROBLEMS

A PRIVATE NON-PROFIT PSYCHIATRIC HOSPITAL, THE ONLY ONE OF ITS KIND IN THE SOUTHEAST



Infirmary: A medical doctor and registered nurses provide 24-hour medical care in a fully equipped infirmary.

Meditation Trail: A nature trail for hiking and meditation winds through nearly a mile of beautifully wooded area.





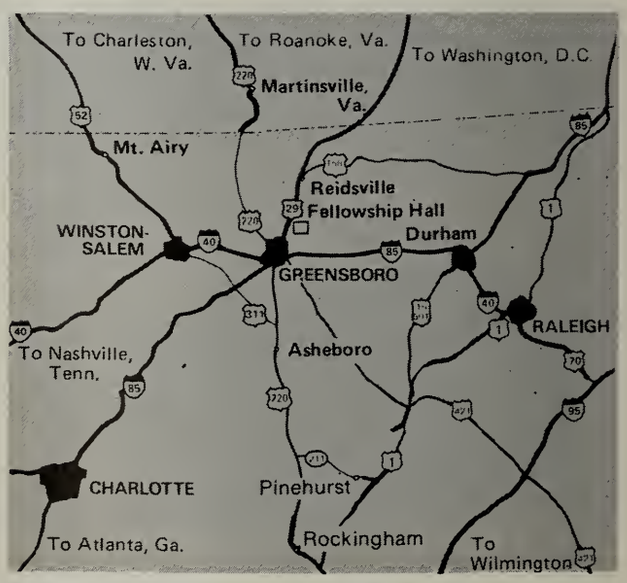
Fellowship Hall's purpose is to provide effective therapy in a relaxed, wholesome atmosphere for the man or woman who has developed a drinking problem.



Counseling: Individual counseling and Group therapy are provided for the family as well as the guests.



Bedroom: Attractive, comfortable accommodations are provided for both male and female guests.



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Located off U.S. Hwy. No. 29 at Hicone Road Exit, 6½ miles north of downtown Greensboro, N. C.
Convenient to I-85, I-40, U.S. 421, U.S. 220, and the Greensboro Regional Airport.

FELLOWSHIP HALL WILL ARRANGE CONNECTION WITH COMMERCIAL TRANSPORTATION

VIRGINIA MEDICAL

The Monthly Publication of The Medical Society of Virginia

Who

VIRGINIA MEDICAL is the official journal of The Medical Society of Virginia. It is edited for Virginia doctors of medicine: practicing family physicians, specialists, researchers, and medical school faculty. Guaranteed **circulation:** 6,350 as of July, 1977.

What

VIRGINIA MEDICAL's pages feature previously unpublished scientific articles (clinical and investigative manuscripts) and reportage of Society activities and personalities. Articles exploring the history of Virginia medicine appear often and are given favored treatment. Text also deals with current issues in politics, the legislature and the socio-economic area as they relate to medicine. The editorial columns present the opinions of physician-writers on subjects of choice. Departments include letters, calendar of meetings, obituary, "who's who" of members given honors, and book reviews.

When

VIRGINIA MEDICAL is published 12 times a year. It is issued on the 9th of each month. **Reservation** date: 1st of the preceding month. **Closing** date: 9th of the preceding month.

Where

VIRGINIA MEDICAL ads are clustered at the book's opening, interspersed through the text pages, and clustered again immediately preceding the editorial columns at the rear of the book. Ads are rotated each month.

How

An **agency commission** of 15% is given to reçognized firms.

Mail **contracts** and **insertion orders** to the Managing Editor, VIRGINIA MEDICAL, 4205 Dover Road, Richmond VA 23221, 804 353-2721.

Mail **plates** and **inserts** to VIRGINIA MEDICAL, care of William Byrd Press, PO Box 27481, Richmond VA 23261, 804 264-2711.

National representative for VIRGINIA MEDICAL is the State Medical Journal Advertising Bureau, 711 South Boulevard, Oak Park IL 60302, 312 383-8800.

Rates

Effective July 1977

All advertising is subject to acceptance by the Editorial Board, comprised of nine practicing physicians, and the Editor, a physician.

Frequency	One page	½ page	¼ page
1 time	$156	$94	$50
3	144	87	45
6	137	81	41
12	125	75	37

Cost per thousand based on 12-time B&W rate: $21.57.

Earned rates based on frequency within a 12-month period for all sizes.

Standard colors (AAAA red, orange, yellow, blue and green): $300 for one extra color. **Matched colors:** $300 for one extra color. **Four-color** rates on request (offset materials required).

Inserts furnished by the advertiser: single-leaf (2-page), two times the earned rate; double leaf (4-page), four times the earned rate. Stock weight and special folds subject to publisher approval. Copy should be at least ½ inch from gutter.

Rates for **covers** and **special positions** available on request.

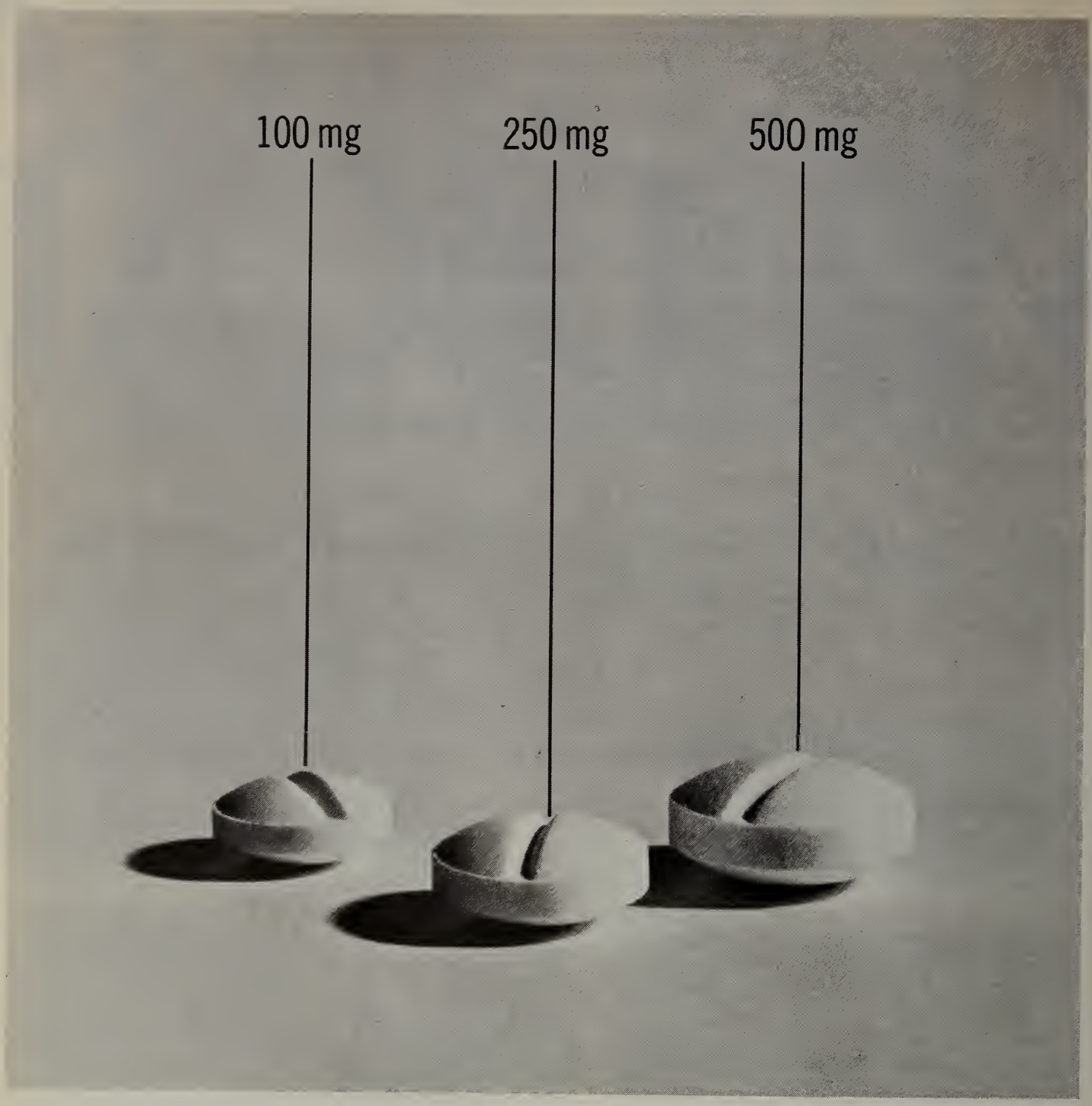
VIRGINIA MEDICAL CLASSIFIED ADS: $10 for 50 words or less; 10¢ per word in excess of 50. Classified display (boxed): $20 per 50 words.

Mechanical

Ad page unit	Width		Depth
Full page	6⅝	x	9
½ horizontal	6⅝	x	4⅜
½ vertical	3⅛	x	9
¼ horizontal	6⅝	x	2⅛
¼ vertical	3⅛	x	4⅜

Print method: web offset. **Binding:** saddle stitch. **Halftone** screens: 133-line.

Trim size: 8¼ x 11. **Bleed** page plate size: 8⅜ x 11¼. **Inserts** untrimmed size: 8⅜ x 11¼ (check with managing editor for quantity, which varies from issue to issue).



Tolinase®
tolazamide, Upjohn

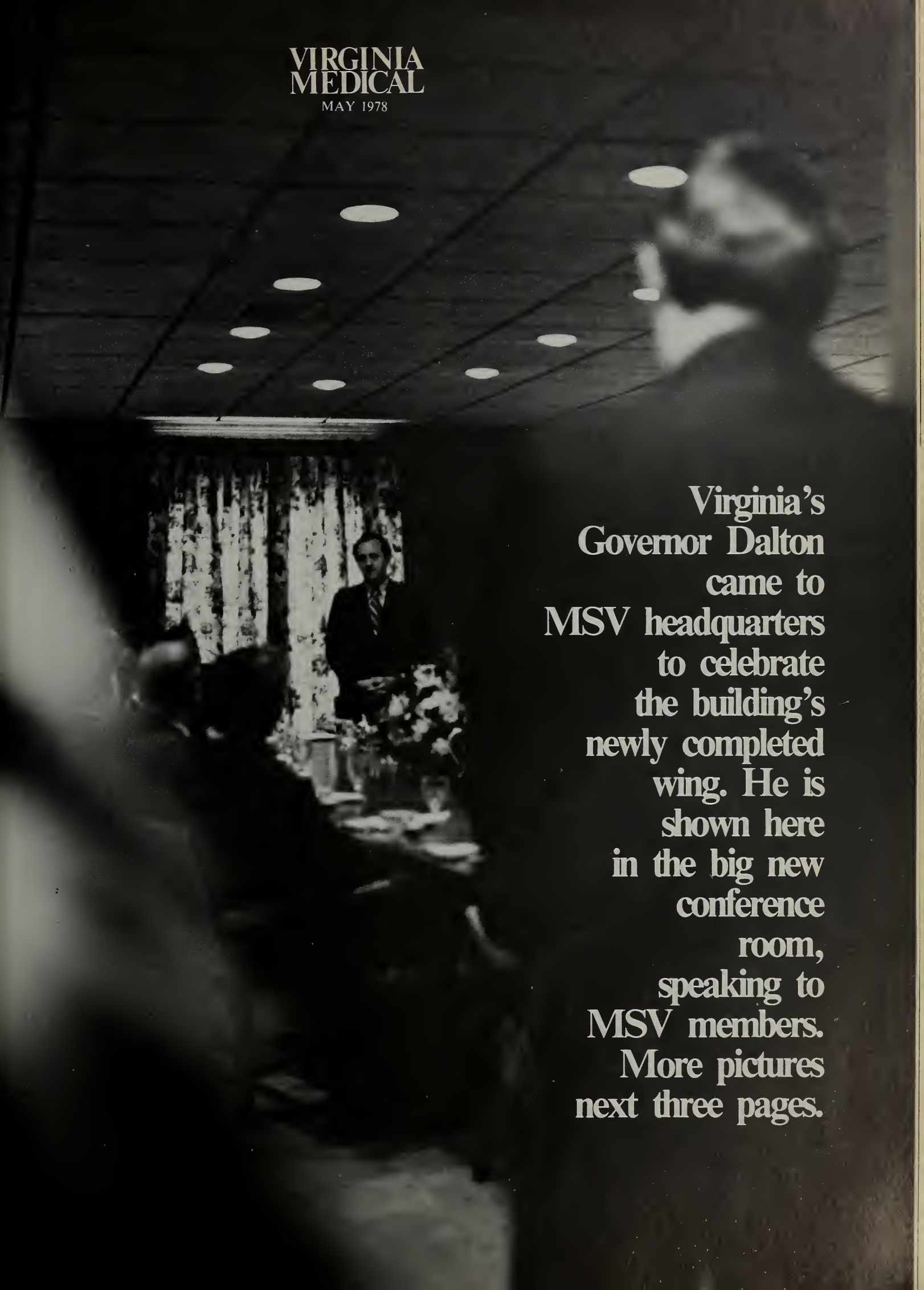
Please contact your Upjohn representative for additional product information.

Upjohn

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VIRGINIA
MEDICAL
MAY 1978



Virginia's Governor Dalton came to MSV headquarters to celebrate the building's newly completed wing. He is shown here in the big new conference room, speaking to MSV members. More pictures next three pages.



More than 50 doctors—MSV officers and presidents of local component societies or their representatives—came from over Virginia to see the new headquarters wing, hear Governor Dalton speak, and have lunch together in the spacious new conference room. Before the Governor's arrival, some of them gathered for this picture.

In the front row, left to right: Drs. Arthur A. Kirk, Portsmouth, Alternate AMA Delegate; Lawrence V. Marshall, Floyd; Fred Davis, Newport News; George M. Nipe, Harrisonburg, First Vice-President; and Peter R. Smith, Fredericksburg.

Second row, left to right: Drs. James B. Jones, Lynchburg, Vice Councilor; Raymond S. Brown, Gloucester, Past President; Khalid J. Awan, Salem; Robert E. Hoyt, White Stone; Frank S. Bacon, Kilmarnock; and Delmar F. Weaver, Culpeper.

Third row, left to right: Drs. Thomas H. Webb, Portsmouth; Fay I. Carr, Jr., Portsmouth; Robert M. Regan, Manassas; Stewart E. Kohler, Fredericksburg; and John L. Dobson, Virginia Beach.

Back row, left to right: Drs. Levi W. Hulley, Jr., Richmond; James B. Kenley, Richmond, State Commissioner of Health; Charles M. Zacharias, Richmond; H. George White, Jr., Winchester; Gervas S. Taylor, Norfolk, Councilor; William E. Painter, Lynchburg, and Prasit Thanaporn, South Boston.



Mrs. John N. Dalton and her husband, the Governor, are escorted into the Society's headquarters building in Richmond by (far right) MSV President William J. Hagood, Jr.

Two MSV leaders converse in the picture below: Councilor Charles M. Caravati, Jr., Richmond (left), and President-Elect Charles E. Davis, Jr., Norfolk.

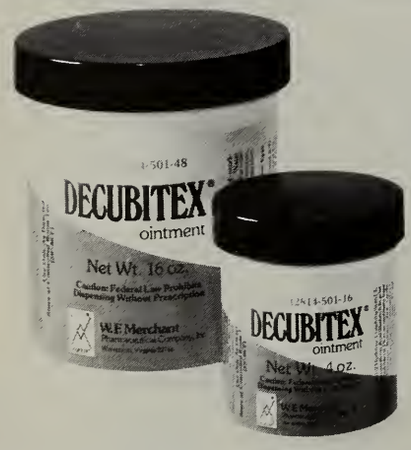


As guests at the main luncheon table applaud (below), Governor Dalton rises to speak. Dr. Hagood, standing left, has introduced him. Seated at the table are, on the left, Past President W. Leonard Weyl, Arlington, and Mrs. Hagood; on the right, Mrs. Dalton and Dr. Davis. The Governor spoke extemporaneously on issues critical to Virginia's economy, primarily energy, and then answered questions from the assembled doctors. Photographs by John Frischkorn





From the celebration with MSV physicians in Richmond, Governor Dalton went to Norfolk to speak at the dedication of the new Basic Medical Education Building at Eastern Virginia Medical School. He is shown here speaking at that ceremony. Behind him on the rostrum were these MSV members: at far right, Dr. Richard F. Clark, Hampton, and at far left on the second row, Dr. Robert L. Payne, Jr., Norfolk; Dr. Mason C. Andrews, Norfolk, was also on the rostrum but does not appear in this picture. All three have positions of leadership in the Eastern Virginia Medical Authority. Others in this picture are lay persons instrumental in fostering construction of the new building. ■



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The Value of Microscopic Control for Difficult Skin Cancers

Kenneth Olshansky, MD, *Richmond, Virginia,*
and Barry H. Dolich, MD, Steven Herman, MD, and Daniel L. Wiener, MD,
Bronx, New York

The principles and technique of strict microscopic control are presented, with emphasis on the importance of using the tumor bed for sectioning rather than the specimen itself.

EVERY YEAR thousands of primary basal cell carcinomas are subjected to many modalities of therapy, and cure rates approaching 95% are achieved. However, it is not uncommon to be confronted with more difficult lesions which carry a higher recurrence risk,[1] such as previous recurrences, large infiltrating tumors, morphea type basal cell carcinomas, and those in critical anatomical areas. These high risk lesions require the most meticulous care in order to ensure a better chance of cure.

It has been suggested that factors contributing to recurrences include errors in diagnosis, improper technique, inexperience and increased aggressiveness of the tumor.[2] No one can argue with these points. We feel, however, that the most significant factor contributing to these higher recurrence rates has been overlooked.

For the routine lesions, the standard mode of pathological exam is sufficient. Here, the physician marks the borders of the lesion and has the pathologist take random sagittal sections across the specimen. If these are free of tumor at the margins and base, the pathologist reports "margins clear". Since most basal cell carcinomas are of the nodular, well-circumscribed type, this is an extremely accurate method giving approximately 95% cure rates. However, the situation changes when the lesions have undergone previous therapy, are deeply infiltrating or are the morphea type. With these lesions, it is impossible to estimate accurately the clinical extent of these tumors. Small nests of tumor cells often infiltrate not only through the deeper layers of the dermis, but well into the subcutaneous tissue and sometimes deeper. Pathologists routinely point out that subcutaneous tissue does not cut well on frozen section, handicapping their ability to detect these small nests of tumor cells. They always await the fixed permanent sections to give their final diagnosis as to whether or not the lesion is completely excised.

Many years ago, the Mohs chemosurgery technique came into being, and began achieving 95% cure rates even for the most extensive lesions.[3,4] This technique follows the principle that by eliminating random sectioning and by subjecting all of the margins and base to microscopic exam, the possibility of missing nests of tumor is minimized. Despite its high success rates, it has been plagued with misunderstanding and the true reason for its success has not been fully understood or emphasized. The purpose of this paper is to present again the basic principles of microscopic control as used in the Mohs chem-

From the Department of Plastic Surgery, Medical College of Virginia (Dr. Olshansky) and the Albert Einstein College of Medicine, Bronx NY (Drs. Dolich, Herman and Wiener). Address Dr. Olshansky at 3500 Kensington Avenue, Richmond VA 23221.

Submitted 1-14-77.

osurgery technique and show how this may be used in everyday practice to help achieve better cure rates.

Principles of Microscopic Control

Random sectioning. In the standard technique of pathological exam (Fig. 1, A-D), the pathologist takes several random sagittal criss-cross sections through the specimen; if the skin margins and bases through these portions are clear, the report will read "margins free of tumor". Except for these representative sections, a great deal of the tissue between these specimens is not examined, and, as noted, a small focus of tumor may escape detection.

Complete microscopic control (Fig. 1, A'-C'): After excising what is clinically felt to be all of the tumor, attention is then focused on the remaining defect. Using marking ink, the base and margins are divided into small flat sections and excised as 2- to 3-mm-thick and 1-cm-wide sections. These are labeled and diagrammed and sent for either frozen or permanent sections, depending upon the type of tissue and the judgement of the physician. The entire *undersurface* of each of these sections, as well as the margins, are subjected to microscopic examination. If any tumor is noted, it is diagrammed and further sections in the involved areas are performed. When a tumor-free state is reached, the excisions are terminated. At this time, when the pathologist reports "margins free of tumor", it is based on a complete examination of the entire margins of resection.

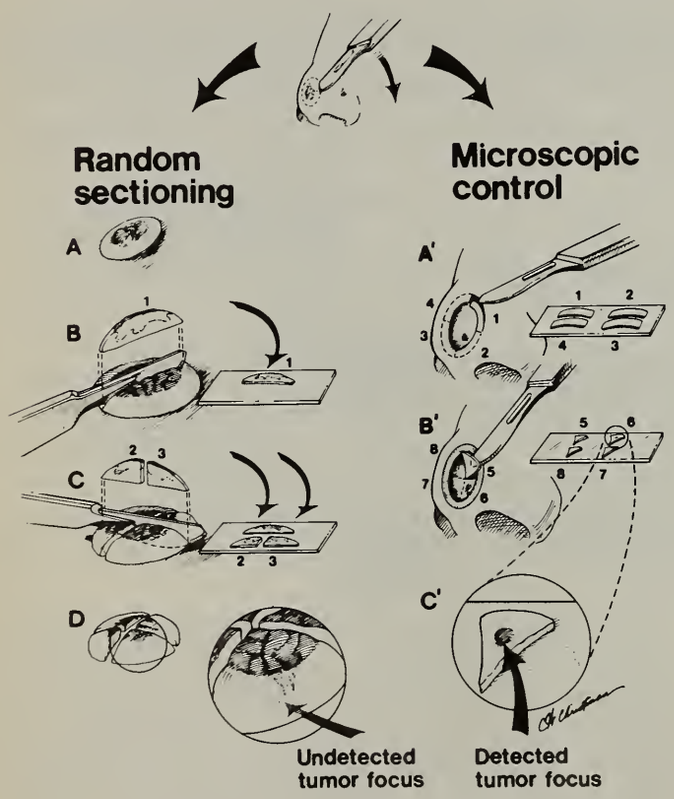


Fig. 1. A: excised lesion. B,C: random criss-cross sagittal sections through specimen. D: deep focus of tumor not detected on sagittal sectioning. A',B': sectioning of margins and bases of defect after tumor excision of A. C': detection of tumor focus missed in D although reported as "margins free of tumor."

As is noted in diagram D and C', the same hidden nest of tumor which may go undetected by random sectioning is detected by the complete microscopic control technique.

We have added this technique to our armamentarium for treating difficult skin cancers and the following is a representative case.

Case Report (Fig. 2)

An 80-year-old female, five years after undergoing excision and split thickness skin grafting for a small basal cell carcinoma of the nasal tip, presented to us with a 1 × 1 cm crusted lesion at the edge of the skin graft. Examination of the internal nares and septum were clinically negative.

Under local anesthesia, the tumor was excised with margins of grossly uninvolved tissue and sent to the pathologist in carefully labeled sections. All margins were invaded by tumor on frozen sections. Because of the aggressive nature of this particular lesion and the three dimensional topography and composite framework of this area, it was decided that all further staining would be by permanent sections. Further sectioning revealed residual tumor in the midseptal region; the patient was brought back to the operating room and further microscopically controlled sections were carried out only in that area of the septum. Again, residual tumor was found burrowing down along the deep portion of the septum. Because of our microscopic control, we were able to limit our excision to the involved area only rather than using a "shotgun" approach on normal tissue. The final specimen was free of tumor. Had random sectioning been performed, this deeper extension under the septal perichondrium might have been missed. The use of horizontal cuts allowed for complete examination of the specimens.

The patient was subsequently reconstructed and no evidence of recurrence noted after two years.

Discussion

Tumors that have recurred following surgery or radiation and those which are more aggressive in nature do not behave in a predictable fashion. Therefore, small extensions of tumor may be found anywhere in the specimen. If all of the margins and base are not carefully examined, these small nests of tumor may escape detection and a recurrence may result.

Since most basal cell carcinomas occur around the mid-third of the face where functional and cosmetic

considerations are critical, any method which can minimize both tissue resection and the incidence of recurrence should be used.

Tromovitch,[5] Robins,[6] Mohs[7] and others have also adapted this method to a fresh tissue technique, eliminating the zinc chloride paste fixative, but adhering to the strict microscopic control. They continue to achieve the same high cure rates. This type of technique is available to anyone treating skin cancer and can be incorporated into our every day surgical armamentarium.

There is no question that this technique is more time consuming, more tedious and requires close cooperation with a competent pathologist. However, the responsibility for the patient must be shared by both the surgeon and the pathologist, in order to achieve the ultimate goal—"margins free of tumor". Each case must be treated individually. In one case frozen sections may be adequate, but another may require permanent sections, depending upon the type of tissue involved, such as large amounts of subcutaneous tissue.

Studies by Pascal[8] et al and Gooding[9] et al have shown that "incompletely excised" lesions have approximately a 33% recurrence rate. Unfortunately, many physicians interpret this as a reason to observe areas known to have tumor at their margins after excision, rather than reexcising the tumor. This is a risky approach. By the time the recurrence is detected, a great deal of invasion and destruction may have occurred. This is especially critical in that most of these tumors involve the mid-third of the face.

The prime objective in treating any cancer is total excision; the reconstructive problems should be secondary. When dealing with these difficult tumors, the patient should be offered every possible means of total tumor extirpation.

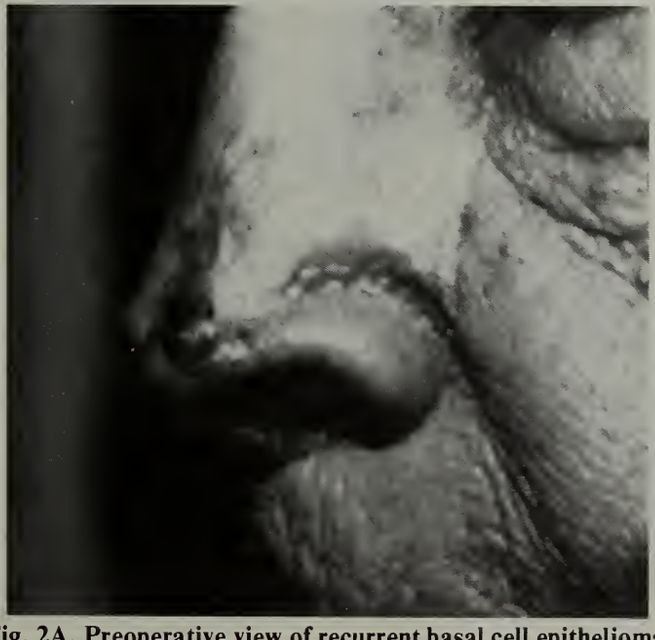


Fig. 2A. Preoperative view of recurrent basal cell epithelioma of nose at edge of previous skin graft.



Fig. 2B. Postoperative view of resection needed to completely excise tumor.

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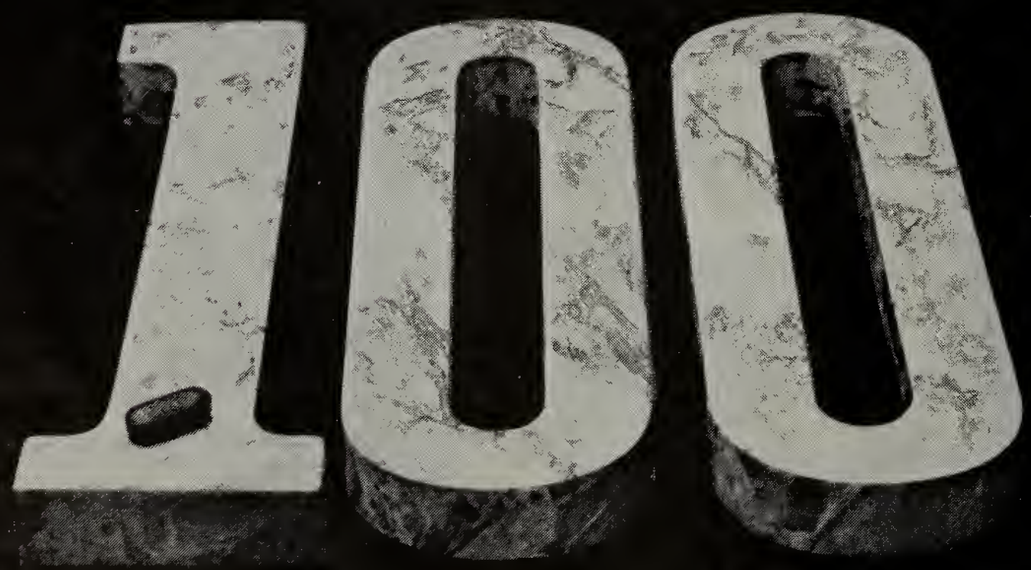
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Transbronchial Brush Biopsy: Anti-Mortem Diagnosis of Pulmonary Infiltrates in Non-Hodgkin's Lymphoma

Rodney H. Smith, MD, Orhan Muren, MD,
Robert B. Scott, MD, and William J. Frable, MD,
Richmond, Virginia

The authors recommend fiberoptic bronchoscopy to help diagnose pulmonary lesions in patients with altered immune responses, citing the courses of two patients with non-Hodgkin's lymphoma.

PULMONARY INVOLVEMENT in patients with altered host defense mechanisms presents a challenging and difficult problem for the clinician. In those patients with depressed humoral immunity, the problem is usually bacterial in origin and marked by an exudative process leading to at least some sputum production. Careful examination of appropriately stained tracheobronchial secretions usually leads to a rapid diagnosis and the proper therapeutic approach.

In those individuals who have underlying disease which blunts either the cell-mediated arm of the immune process selectively or both humoral and cell-mediated immunity, the picture is different, and the etiology of pulmonary infiltrates becomes more elusive. Fungal diseases, tuberculosis, protozoan and viral disease become prime suspects, as does possible extension of the primary disease to involve lung parenchyma.[1,2] It is in this situation that the application of fiberoptic bronchoscopy has attained great significance. Cytologic and cultural information drawn from bronchial washings, bronchial brushing, and pinch biopsy can direct therapy more specifically than that dictated from the examination of the frequently unsatisfactory expectorated or induced sputum specimens, or from empiricism based on past experiences.

Non-Hodgkin's lymphoma is known to involve lung perenchyma as either primary pulmonary lymphosarcoma, usually presenting as a solitary nodule and responding well to local excision[3–5] or as parenchymal involvement in the face of disseminated disease.[6,7] When parenchymal disease is present, the radiographic picture is quite variable and may mimic inflammatory processes, especially when the onset is rapid and progressive.

It is in this latter setting that we present case reports of two patients with advanced lymphomas who developed acute, rapidly-evolving pulmonary infiltrates that were diagnosed ante-mortem with fiberoptic bronchoscopy and cytology when the etiology of the lung process was obscure.

From the Department of Medicine, Pulmonary Division (Dr. Smith and Dr. Muren) and Hematology Division (Dr. Scott) and the Department of Surgical Pathology (Dr. Frable), Medical College of Virginia, Richmond. Address correspondence to Dr. Smith at Box 93, MCV Station, Richmond, VA 23298.

Submitted 3-11-77.

Case Reports

Case 1.

W. T., a 79-year-old retired white male banker, was in good general health until January 1975 when he began to feel weak and lost approximately ten pounds over the next two months. By March 1975 he had become somnolent and uncommunicative with poor appetite but no fever, night sweats, cough or apparent pulmonary dysfunction. Previous history was significant only in that he had a severe case of influenza in 1918 with resultant "scars" on his lung, and a transient ischemic attack in November 1974 for which he had received warfarin for an undetermined period of time. He was hospitalized in March and found to have enlarged cervical lymph nodes bilaterally. Physical examination showed a normal chest examination and a negative central nervous system examination. His liver was palpable 3 cm below the right costal margin with no nodularity or tenderness. The rest of his physical examination was within normal limits. Chest x-ray revealed bilateral hilar enlargement and old apical scarring bilaterally. IVP was negative. His hemoglobin was 12.7 gm% with a normal white count and normal platelet count. Bone marrow examination at the time of diagnosis revealed normal cellularity and no evidence of tumor infiltration. A cervical lymph node biopsy was performed which showed lymphocytic lymphoma, poorly differentiated, diffuse. He was begun on a course of vincristine 1. 5 mg intravenously weekly for four weeks and prednisone 60 mg daily for four weeks. Following this he was placed on maintenance cyclophosphamide 150 mg per day, tapered quickly to 50 mg per day. On this regimen he developed hematuria, and treatment had to be discontinued. However, his chemotherapeutic regimen ameliorated his constitutional symptoms and his adenopathy regressed. He did well until July 1975 when he began to develop shortness of breath on exertion. This progressed and on July 18, 1975, a chest x-ray showed a pneumonic infiltrate in the left base. The patient had no fever, chills, night sweats, or productive cough. Appropriate sputum cultures were collected with induced sputum and he was placed empirically on isoniazid with a presumptive diagnosis of active tuberculosis. His PPD was negative. On July 30, he was hospitalized because of progressive shortness of breath and weakness. On examination, he was found to have cyanosis of the nail beds and lips but was afebrile. Chest examination showed evidence of consolidation of the left lower lobe. Sputum smears revealed no acid-fast organisms but he was placed on rifampicin in addition to isoniazid when it was noted that the lesions were cavitary on chest x-ray and that there was fluid at the left base (Fig. 1). A cope needle biopsy at the time of thoracentesis showed only thickened pleura. On August 4, 1975, he underwent fiberoptic bronchoscopy. A cobblestone appearance of the bronchial mucosa of the left lower lobe was seen; this extended to the takeoff of the left upper lobe. Bronchial brushing cytology showed lymphoma cells (Fig. 2). Cultural material of bronchial washings as well as stains for acid-fast, mycotic and protozoa organisms were all negative. The patient continued to deteriorate and required endotracheal intubation. Vincristine 1.5 mg IV and prednisone were begun. He did not respond and died on August 9. An autopsy revealed lymphocytic lymphoma, poorly differentiated, diffuse, involving right cervical, hilar, mediastinal, carinal, para-aortic and para-esophageal lymph nodes. The lymphoma infiltrated the left lung with necrosis forming cavities up to 6 cm in diameter (Fig. 3). There was 2000 ml of pleural fluid on the left and 300 ml on



Fig. 1. AP chest x-ray at bronchoscopy shows diffuse cavitary process involving entire left lung and right lower lobe with left pleural effusion.

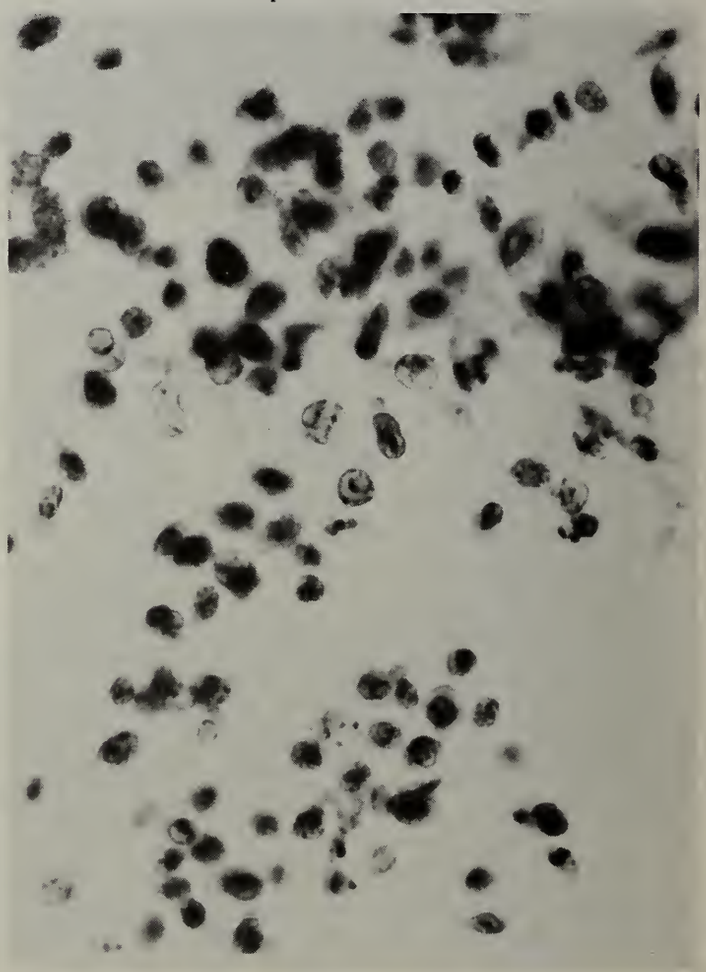


Fig. 2. Cluster of malignant lymphocytes from bronchial brushing. Cells lie independently. Nuclear chromatin is irregular; there are small nucleoli. Papanicolaou stain ×600.

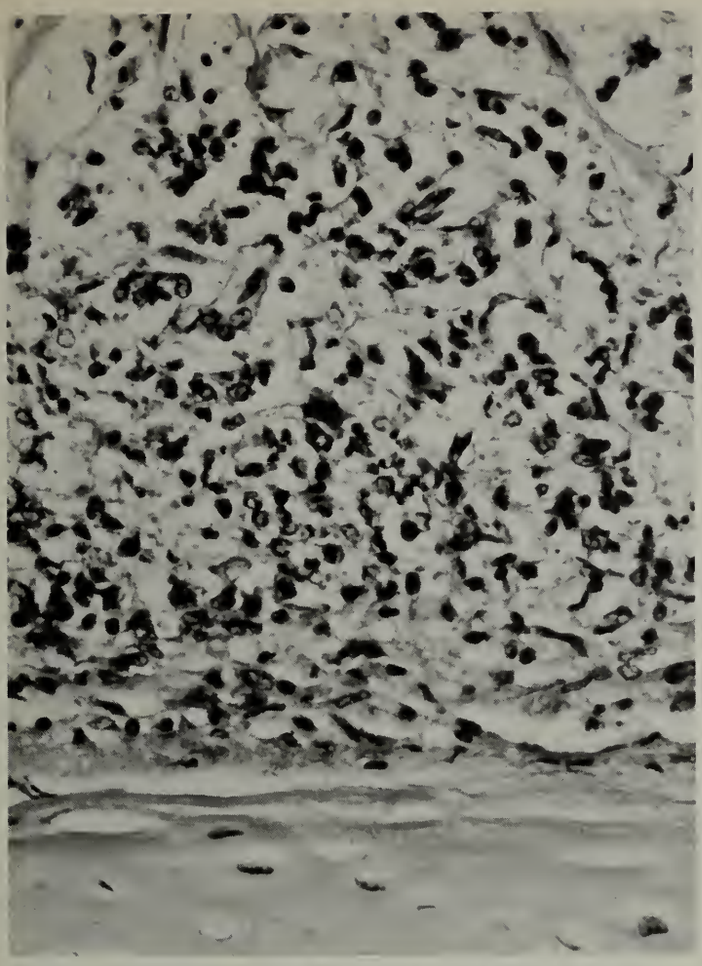


Fig. 3. Section of bronchus at autopsy. Malignant lymphoma infiltrating submucosa overlying bronchial cartilage. Overlying bronchial cells were absent in several areas, allowing direct sampling. H&E ×375.

the right. Fibrosis was found in the right upper lobe as evidence of old pulmonary tuberculosis. There was early bronchopneumonia in the right lung and severe atherosclerotic cardiovascular disease evidenced by severe occlusion of coronary arteries, an old myocardial infarction, severe aortic calcification, and moderately severe cerebral atherosclerosis. The left kidney was atrophic with narrowing of the left renal artery.

Case 2.

G. M., A 23-year-old white male, was well until November 1975, when he was first diagnosed as having diffuse histiocytic lymphoma by right supraclavicular node biopsy. He was treated with radiation therapy, 1500 rads to spleen, upper abdomen, and Waldeyer's ring, followed by a course of chemotherapy with cyclophosphamide, vincristine, and prednisone. During the period of therapeutic induction, he was noted to have some pneumonic infiltrates and a pericardial effusion. Following repeated efforts at noninvasive diagnosis, a lung biopsy and pericardial biopsy and fenestration were carried out. The lung biopsy showed only interstitial fibrosis but no bacterial pathogens or fungi were isolated. The pericardium showed only fibrosis. Sputum submitted for cytologic diagnosis revealed cells of histiocytic lymphoma. He was begun on additional chemotherapy with cyclophosphamide and vincristine. Within 36 hours he became afebrile and was discharged improved on January 17, 1976. The patient continued to do well with maintenance of cyclophosphamide and vincristine therapy until May, when he developed cough, fever, and mild shortness of breath at rest. He denied chest pain or hemoptysis. Physical examination at this time revealed an alert white male in mild respiratory distress with normal vital signs. He was afebrile. He had no peripheral adenopathy. Head and neck examination was normal. Auscultation of the chest showed inspiratory rales bilaterally at the bases to the level of the scapula. No rhonchi were heard. The heart was within normal limits. Abdominal palpation revealed no organomegaly. Decreased deep tendon reflexes were noted in the lower extremities. No sensory loss was noted initially. Chest x-ray showed a mass lesion in the left lower lobe with radiolucency centrally. Hemoglobin was 11.7 gm%, WBC 5900 with 47% polymorpholeukocytes, 22% bands, 29% lymphocytes, and 2 monocytes. Platelet count was 260,000/mm^3 lumbosacral spine and right hip films were normal. He had no sputum production. Multiple blood cultures and cultures of induced sputum were negative for bacterial and mycotic pathogens as well as mycobacteria, but due to markedly compromised host defense mechanism pneumocystis carinii was an etiological consideration. Although no tissue confirmation was available, sulfamethoxazole and trimethoprim were begun. No response to therapy was noted after five days. On the day following institution of this therapy, he underwent fiberoptic bronchoscopy with fluoroscopic control. Brush and pinch biopsy of the left lower lobe mass were obtained. Both tissue and cytologic examinations revealed histiocytic lymphoma. Special stains of the cytologic smears for pneumocystis carinii and cryptococcus were negative. Cultures for bacteria, fungi, and tuberculosis were all negative. His chest X-ray remained unchanged. He was given doxorubicin hydrochloride 74 mg IM and 1, 3 bis-(2-chloroethyl)-1-nitrosourea (BCNU) 92.5 mg IM. Within 12 hours his fever subsided and he showed marked clinical improvement. He was observed for two subsequent days in the hospital and was discharged improved. Followup visits through six weeks following discharge showed marked improvement, with a weight gain of 20 pounds and no further evidence of recurrence of his disease. He was maintained on intermittent doxorubicin hydrochloride, BCNU, and prednisone therapy.

Discussion

These patients illustrate two points. One is that pulmonary lesions in patients with altered immune responses are difficult to characterize. The second is that lymphoma in its disseminated form can involve lung parenchyma. Fiberoptic bronchoscopy is a safe and fruitful alternative to thoracotomy to help resolve diagnostic dilemmas in these patients and allows time for institution of appropriate, specific therapy. It should be emphasized that the radiologic and clinical presentation of parenchymal involvement is

nonspecific and may be identical to that seen in other processes, specifically mycobacterial or other granulomatous disease. These etiologies were considered quite appropriately in our patients with diffuse cavitary disease and a solid mass with cavitation.

Only a rare case report of non-Hodgkin's lymphomas diagnosed cytologically can be found in the literature.[8,9] Several cases of Hodgkin's disease involving the lung have been reported, correctly diagnosed from cytology specimens of sputum and bronchial washings.[10–13] Provided with good quality material as illustrated from these cases and a clinical history that lymphoma is a possibility, the cytology laboratory should be able to make the correct diagnosis from the single malignant cells found in the specimens. The malignant characteristics are readily apparent in the abnormal shape of the cells, the irregular distribution of chromatin, and the prominent nucleoli found with poorly differentiated lymphosarcoma. Even the well-differentiated lymphoma may have lymphocytes that appear to be of normal size, but careful examination of the chromatin pattern will indicate that it is granular or open rather than opaque. While such cells might appear in small numbers in chronic pulmonary inflammation, they are usually numerous in typical bronchial brushing specimens when there is lymphomatous involvement of the lung. Large numbers of these cells should make the cytopathologist strongly consider the diagnosis of lymphosarcoma. These cells lie singly without demonstrated relationships to each other. This differentiates them from oat cell carcinoma, where the cells have at least some cohesion and the nuclei produce distortion of each other within clusters.

Recent reports in the literature show dramatic increases in survival with new multidrug chemotherapy in late-stage Hodgkin's Disease, breast carcinoma, and other neoplasms.[14–16] This certainly justifies an aggressive diagnostic approach to patients with these disorders. In addition, the same vigor may be indicated in assessing pulmonary infiltrates in patients with less favorable neoplasms, to identify treatable inflammatory processes as well as extension of the underlying disease, which may be reversible. We believe this to be particularly valid in patients with rapid onset and progression of their pulmonary lesions in whom a reasonable return of function can be foreseen with appropriate therapy.

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Keloid Research

The Research Laboratory of the Division of Plastic Surgery at the Medical College of Virginia is investigating the etiology of keloid under sponsorship of the National Institutes of Health (GM-20298). Researchers are interested in studying black females with keloids. Patients willing to be studied and treated should be referred to I. Kelman Cohen, MD, Box 154, MCV Station, Richmond VA 23298, 804 770-7981.

CANCER TRENDS

Edited by J. Shelton Horsley, III, MD, Gerald Goldstein, MD, and Francis E. Rosato, MD.

Electron Beam Radiation

Anas M. El-Mahdi, MD, ScD, *Norfolk, Virginia*

The author presents electron beam therapy as an accurate method of sparing underlying normal tissue when delivering an irradiation dose to superficial lesions and provides a guide to its areas of utilization.

IN 1926 at the Monte Generoso Laboratory in southern Switzerland, three German engineers installed isolators. Using lightning as a source of high tension, they conducted the basic experiments for the development of a high voltage machine in the one million electron volt (MeV) range. More than 20 years later, the first clinical use of electrons was reported by Schubert when he wrote of curing cancer of the vulva by electron beam therapy.[1]

Electron beams are particulate radiations, while x-ray or gamma beams are electromagnetic waves. The main physical characteristic of the electron beam is the sharp dose falloff. Within the first few millimeters of irradiated tissue, the dose approaches 100%, maintains a plateau to a given depth, then falls off sharply beyond that depth. The width of the plateau depends on the electron beam energy.[2] In a clinical situation, this will provide a means by which a higher dose is delivered to the tumor and lower dose to the underlying normal structures. Thus, the characteristic advantage of electron beam therapy clinically is in treating relatively superficial lesions.

From the Department of Radiation Oncology and Biophysics, Eastern Virginia Medical School, Norfolk VA 23507.

Sponsored by the Professional Education Committee, Virginia Division, American Cancer Society.

Submitted 11-21-77.

Electron beams with energies ranging between 6-18 MeV are principally used in the treatment of the following conditions:

Skin.

Generalized neoplasia as in patients with mycosis fungoides or Kaposi's sarcoma, or localized as in patients with basal cell carcinoma.

Head and Neck Tumors.

A. As the only method of treatment: Malignant tumors of the lip, buccal mucosa and gingiva may be treated by a full course of electron beam therapy. B. In conjunction with photon beams (x-ray or ^{60}Co): Radiation treatment of primary malignant tumors of the salivary gland, tongue, floor of mouth and tonsillar fossa may be given by a combination of photon and electron beams. The treatment is usually started with photons to achieve adequate depth dose. After delivering half or more of the prescribed radiation dose, the rest of the treatment is given by an electron beam, thus minimizing undue radiation of deeply-seated vital structures. C. As postoperative treatment: Electron beam therapy to the area of cervical neck nodes is an elegant method of treating tissue at risk of tumor recurrence. The spinal cord, especially at the base of the skull, is thus protected from the higher doses which are commonly and unavoidably obtained with ^{60}C or x-rays. D. Tumor recurrences after surgery or radiation treatment in

the head and neck region present a clinical dilemma. The normal tissues, both superficial and deep, are usually devitalized by the recurrence of the tumor and by the previous method of treatment. In addition, an accelerated aging process is not uncommon in patients with head and neck malignant neoplasia. Using a combination of photon/electron radiation treatment will minimize an added insult to the normal tissue.

Breast.

The role of radiation in the management of primary carcinoma of the breast is still an unsettled question, even with reported advances in multiple drug therapy. The author believes that the indications for postsurgical radiation treatment are: 1) Medial quadrant lesions. 2) Primary tumors more than 5 cm in diameter. 3) Fixation to skin and/or pectoral fascia. 4) Multiple malignant foci in surgically removed breast. 5) 20% or more positive axillary nodes. 6) Tumor invasion of the capsule of the axillary lymph nodes.

Electron beam radiation treatment is of particular value in the postsurgical management of breast cancer. After surgical removal of the primary and the axillary lymph nodes, radiation treatment of suspected residual subclinical foci in the anterior chest and/or the peripheral lymphatics is indicated.

The peripheral lymphatics of the breast can be adequately treated by any high energy photon source, either ^{60}Co or linear accelerator. The electron beam, however, is preferred to tangential ^{60}Co field in treating the chest wall because the more accurate technique minimizes lung irradiation. The average thickness of the anterior chest wall after radical mastectomy is between 2-3 cm. Compared to a photon beam, an electron beam of 6 to 9 MeV will deliver a higher superficial dose to the chest wall and a lower dose to the lungs.

In conclusion, electron beam therapy is based on sophisticated dosimetry and techniques. In clinical situations where it is important to give a high dose to a limited volume, or to avoid overdosing structures underlying the tumor-bearing tissue, the electron beam offers a superior method of therapy.[3]

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CANCER TRENDS COMMENT

Dr. Anas El-Mahdi has summarized nicely the major areas of applicability of the electron beam in cancer treatment. The "bottom line" of his presentation is the all-important concept that this high energy particle therapy offers a more accurate method for delivering radiation therapy with sparing of critical underlying normal tissue. He has outlined its present, general areas of utilization. One can appreciate that, where an irradiation dose is needed on a location with particularly radio-sensitive and critical adjacent normal tissue, electron beam therapy is the optimum choice.

In his discussion of the possible application of electron beam therapy in the management of breast cancer, Dr. El-Mahdi has correctly pointed out the yet unsettled question of the role of postsurgical (adjuvant) x-ray therapy in the management of breast cancer. There are those who cite the National Surgical Adjuvant Breast Project Cooperative Study, which failed to show any advantage to patients treated with adjuvant x-ray therapy as opposed to those who received no additional treatment, and, on the basis of this study, many have abandoned adjuvant radiation therapy for breast cancer. An increasing interest has surfaced again for this program, but with different dosage schedules and almost always in conjunction with adjuvant chemotherapy. Theoretically, such an adjuvant radiation/chemotherapy adjuvant approach has the advantage of providing additional protection against local recurrence by the use of x-ray, at the same time protecting the patient from potential systemic recurrence by utilizing adjuvant chemotherapy. There are many study groups looking at such a drug/x-ray combination program, and, hopefully, the answer to the efficacy of this approach will be forthcoming in the near future.

FRANCIS E. ROSATO, MD

STUDENT CANCER DAY

THESE case reports and panel discussions were presented at "Student Cancer Day", an annual event at the University of Virginia. A program is planned about a theme—in this instance, unusual problems in pediatric malignancy—and guests well-known in the field are brought in for the day. Student panelists prepare case presentations, pathological material, and radiographs and take part in the discussions.

The faculty panelists at this session, in addition to the moderator, were Robert Miller, MD, of the National Cancer Institute; William Newton, MD, Ohio State University; and William Constable, MD, Thaddeus Kelly, MD, and Kuldeep Teja, MD, of the University of Virginia. Diane M. Komp, MD, was the moderator.

The student panelists were Sidney Atkinson, Hoye Duckworth, Robert Fortunato, and Robert Jones.

Case. 1: Colon Carcinoma and Lymphoma.

A black female at age 9 was diagnosed as having well-differentiated adenocarcinoma of the sigmoid colon. (Fig. 1). She presented with a four-month history of abdominal pain and diarrhea followed by rectal bleeding. At surgery, a deeply invasive tumor was found with metastatic carcinoma in one lymph node. Treatment for this patient consisted of sigmoidcolectomy and six courses of 5-fluorouracil administered over one year. No radiotherapy was given. A "second-look" operation performed one month after the cessation of chemotherapy demonstrated no recurrent or residual disease. The patient did well for seven years. In the spring of 1976 she began to experience early satiety and vague abdominal pain. A palpable abdominal mass was noted in November, 1976.

The family history was negative for cancers or colonic polyps. A right lower quadrant abdominal mass extended into the right upper quadrant. No masses could be palpated in the rectum, and the stool was negative for occult blood.

Barium enema demonstrated a large abdominal mass extrinsically displacing the bowel without disruption of the normal bowel mucosal pattern. Proctoscopy failed to demonstrate any abnormal lesion. Biopsy of the abdominal mass demonstrated a diffuse, poorly differentiated lymphoma. The patient was treated with combination chemotherapy and 2000 rads radiotherapy with poor response. She expired four months after the diagnoses of lymphoma.

At the time of autopsy, no adenocarcinoma was seen at the site of the original anastomosis. There was at the time of autopsy, however, lymphoma in the capsule of the liver, abdominal and paratrachial nodes, the pleural and peritoneal aspects of the diaphragm and the visceral pleura.

Discussion.

NEWTON: This is an unusual patient since black children don't get cancer as often as white children and generally tend to get different kinds of cancers. Their leukemias and tumors, and how they respond, are different. Very few children develop gastrointestinal adenocarcinomas. In our own institution we have accumulated somewhere around 2500 pediatric cancers over the years and we have one example of colonic cancer. Her case was similar in that she developed a lymphoma after being cured of her colonic cancer. Our patient had a deficiency of IgA as did her brother. This case looks a little like Burkitt's lymphoma. There is some starry-sky appearance to that lesion. Old-timers would call it lymphosarcoma. Hopefully T and B cell markers and a few other tests will refine our classification of childhood lymphomas.

CONSTABLE: I'm interested in this association of

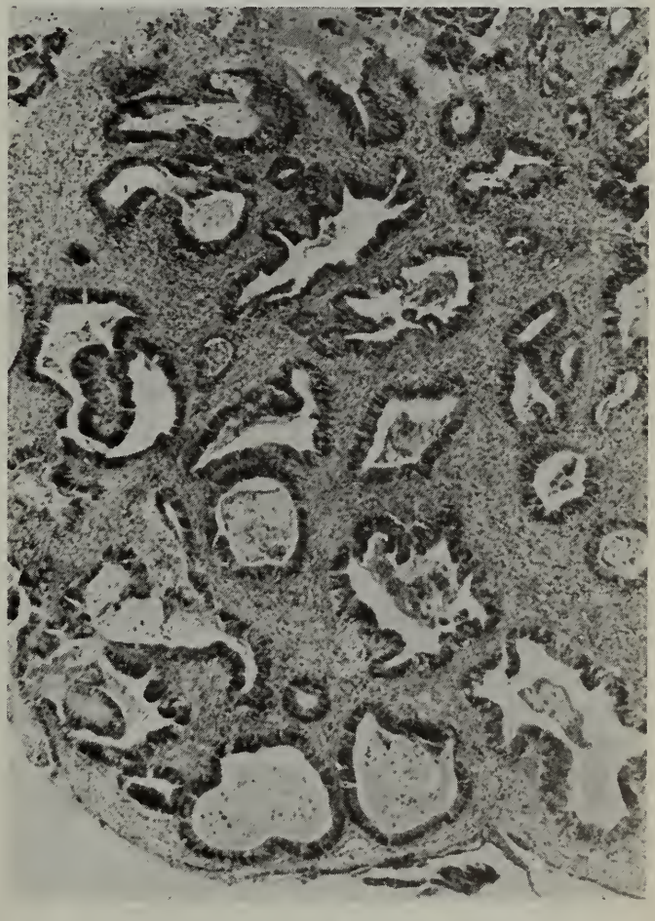


Fig. 1. Case 1: Biopsy material obtained at original proctoscopy demonstrates fairly well-differentiated glands, some containing mucin. There is nuclear hyperchromatism, some degree of cellular pleomorphism and stromal invasion.

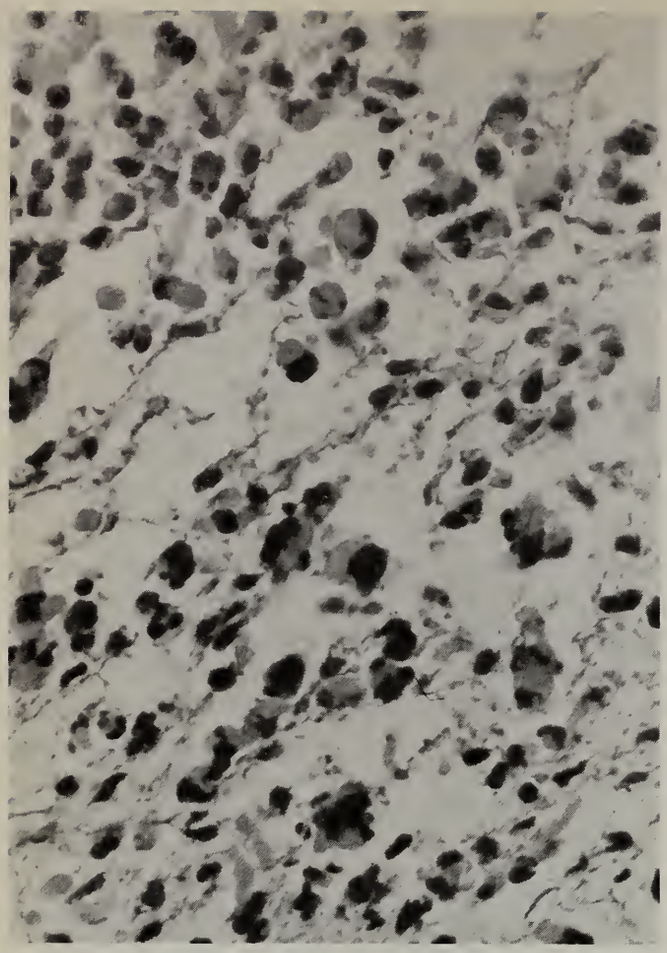


Fig. 2. Case 2: Typical features of rhabdomyoblasts—pleomorphic, deeply eosinophilic cytoplasm with large hyperchromatic nuclei. No definite cross-striations seen.

adenocarcinoma and lymphoma. Could it be that the 5-FU in this case was immunosuppressive as with the renal transplants where they've seen lymphomas? Could this possibly be related to the development of lymphomas in this case?

KELLY: Does malignancy arise from a single cell or from different cell lines? If you looked at a tumor in a black female and you found malignant cells that were both type A and type B for G6PD, this would mean that the tumor had a multicellular origin; whereas if all the cells that you analyzed in the tumor had only one of the two genotypes, either G6PD A or B, this would be an argument for the single type. And while it doesn't always hold true, there is the feeling that those people that inherit single gene abnormalities that give rise to malignancies are likely to develop multicellular tumors.

Case 2: Childhood Rhabdomyosarcoma and Maternal Breast Cancer.

A 5-year-old white male presented with a 7-month history of right chronic otitis media and a 4-month history of partial right facial paralysis. A middle-ear mass was noted at the time of right myringotomy. A biopsy of the mass had the gross appearance of granulation tissue but microscopic examination indicated embryonal rhabdomyosarcoma (Fig. 2). A modified right radical mastoidectomy was performed without evidence of residual tumor.

He was greated with 5000 rads of cobalt irradiation and actinomycin D over four months. Eight months after surgery, he developed cervical pain and complete cord compression at T-9 level. Decompressive laminectomies were performed C-5 to T-10 with the finding of metastatic tumor. He was treated with 4000 rads, vincristine and cyclophosphamide. He developed, 5 months later, L-2 level tumor compression, and radiotherapy to that area was begun. He died 15 months after diagnosis from intracranial spread of rhabdomyosarcoma.

This patient has a remarkable family history with a high incidence of malignancy on the maternal side. His mother was found to have adenocarcinoma of the left breast at age 25. The maternal grandmother was diagnosed as having adenocarcinoma of the right breast at age 46. The maternal great grandmother died with pancreatic cancer. A total of five female members had breast cancer.

Discussion.

NEWTON: We're looking at the offspring of children who have had all kinds of cancer and we haven't seen a second-generation cancer patient yet. I think that in this particular family I would be particularly concerned about the carcinogenicity of any therapy that was given to the mother, and see if it had been given during the gestation period.

MILLER: In families in which two children have rhabdomyosarcoma, there is a high frequency of breast cancer—early—in close female relatives. At St. Judes Hospital, when they see a child with rhabdomyosarcoma, they instruct the mother on self-examination of her breasts to seek an early tumor.

KELLY: I think there's pretty good recognition that women who have carcinoma of the breast, particularly bilaterally and premenopausally, tend to segregate close to an autosomal dominant within families.

Cases 3 and 4: Familial Bone Cancer.

D.T. was a 14-year-old black girl who came for evaluation of a mass in the right gluteal region. A 10 × 10 cm firm immobile mass, not fixed to the overlying skin, was found. A bone scan exhibited a vascular lesion involving the gluteal soft tissue and ilium, and biopsy proved the mass to be chondrosarcoma. The tumor was cellular and highly vascular with chondroid matrix and focal necrosis.

The tumor extended into the sacroilliac joint over the lateral aspect of the posterior ilium and leg. Following incomplete excision, 6000 rads to the area was given.

A month after discharge, a Grade III/VI systolic ejection murmur was heard and attributed to mild valvular pulmonic stenosis. Chemotherapy was initiated with adriamycin and imidaxole carboxamide, later changed to actinomycin D, vincristine and cyclophosphamide. She died six months after diagnosis.

At autopsy, the chondrosarcoma extended into the pelvis with involvement of the sacral plexus, venous invasion with solid tumor extension throughout the inferior vena cava,

renal veins, and right atrium. A chondrosarcomatous saddle pulmonary embolus was present with organization and extension throughout the left pulmonary arterial system with metastatic chondrosarcoma to the left lung.

L.T. was the younger sister of D.T. At 5 years of age, she was noted to have a left medial epicanthal mass rapidly increasing in size. A biopsy of the mass demonstrated embryonal rhabdomyosarcoma. She received actinomycin D 25mg/kg for 3 days and cobalt 60 radiotherapy, 6000 rads. Treatment was tolerated well and the tumor regressed.

Two years later she underwent enucleation of the left eye because of persistent photophobia, pain, and loss of vision. Six years after diagnosis, she complained of a painful mass in the left orbit. Skull films verified new bone in the region of the left orbit. A biopsy of the left orbital mass revealed an osteosarcoma (Fig. 3). A left front-temporal craniotomy was performed with subtotal removal of the tumor. Despite chemotherapy, she died nine months after documentation of her second primary tumor.

The family history is pertinent in that her father had a bone tumor. We don't know the nature of it, but it required resection of the mandible. There is also some question of bone tumors in the paternal grandfather and uncle.

Discussion.

MILLER: There are two possible reasons that a second malignancy might develop. One is that there is a predisposition to cancer in general; i.e., the second tumor has no relation to the therapy or occurs more readily because the threshold is lower for inducing that tumor. The other is that the second tumor is due entirely to the therapy—that it is radiation-induced, for example. If retinoblastoma is bilateral, there is a higher frequency of various second tumors spontaneously occurring than one would expect in the general population, expecially osteosarcoma. If children with bilateral retinoblastoma are treated with radiation, second tumors are more easily induced in the orbits after a shorter latent period than in radiation-treated patients with tumors that were not heritable.

It is conceivable that the patient might have a genetic disorder without the full manifestations of the disease, and the tumors running through this family might be related to the child's disease.

KELLY: Multiple primaries follow tissue distributions that are similar to the appearance of multiple tumors within a family. That is, the association of tumor types may be similar to multiply-affected family members with single tumors.

KOMP: One final comment about this case. In retrospect, the therapy for a child with rhabdomyosarcoma was appropriate regardless of a predisposition toward bone malignancy. When we think about second malignancies, it is a small percentage of patients. There are many studies underway in childhood malignancies that are trying to determine minimal therapy, but we must not consider withholding appropriate, potentially curative therapy for a complication because of a concern for second malignancy, at least at this time.

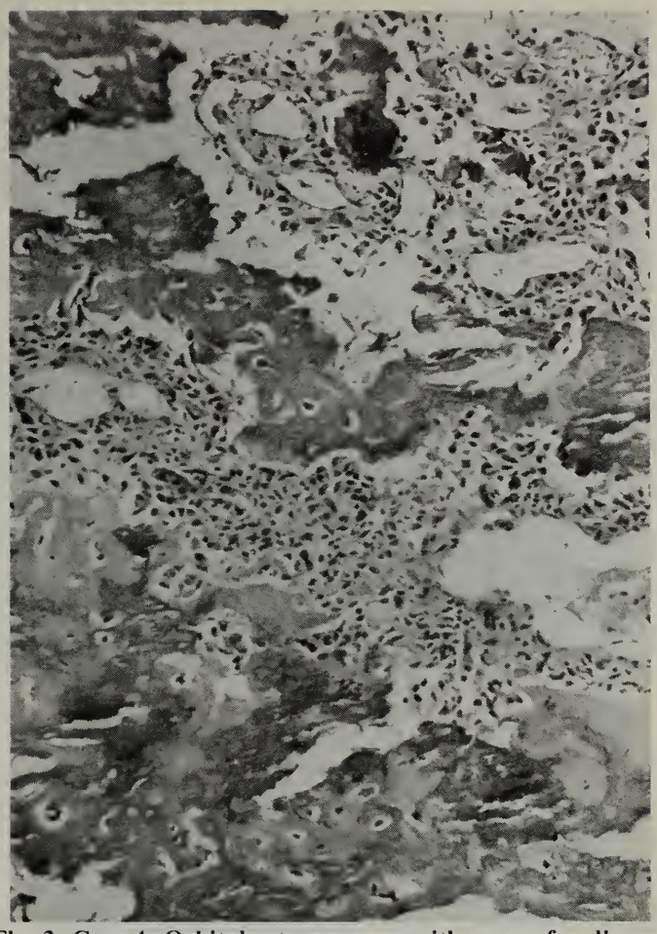


Fig. 3. Case 4: Orbital osteosarcoma with areas of malignant osteoid and chondroid matrix associated with malignant stroma.

(Bibliography on request.)

The help of Dr. Sharon L. Hostler is acknowledged for the researching of the pedigree for patient B. F.

This is an edited version of one session of the Student Cancer Day program presented on March 4, 1977, at the University of Virginia and sponsored by the American Cancer Society.

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Brodie's Abscess: Unusual Radiographic Findings

P. M. Fitzer, MD, *Newport News, Virginia*

An air fluid level is manifested radiographically in a case of Brodie's abscess. Computed tomography was useful in delineating the extent of lesions of the long bones.

BRODIE'S ABSCESS[1], or localized chronic osteomyelitis, is infrequently encountered at present. This report describes an example of this lesion with a most unusual radiographic manifestation, an air fluid level. The utility of computed tomography in assessing the extent of lytic involvement is stressed.

Case Report.

A small anterior draining sinus just below the right knee was noted on physical examination of an 86-year-old man admitted for an unrelated medical problem. The sinus tract had not been recently aspirated or manipulated in any manner. He had been struck in the right shin, 65 years previously, by a baseball bat. Since then, he stated, he had experienced many episodes of "bone infection". Aside from the chronic draining sinus, the leg was not troublesome; there was no fever or pain. The knee had been fused many years ago.

Physical examination revealed mild redness and ulceration around the sinus opening. Radiographs showed a central lytic area in the proximal tibia surrounded by a dense zone of sclerotic bone. There was mild periosteal reaction. An air fluid level was present on the horizontal beam lateral radiograph (Fig. 1). To better assess the extent of lytic involvement, computed tomography was performed (Fig. 2). Marked lytic involvement was noted, with an apparent absence of cortical bone anteriorly. The abscess cavity was covered anteriorly only by a thin layer of soft tissue. Pseudomonas and Chromobacter were cultured. Because the lesion was essentially asymptomatic, and because of other unrelated medical problems, no antibiotic therapy was prescribed.

Discussion.

Brodie's abscess is found typically in the medullary space near the end of a long bone, but tubular or vertebral bones may occasionally be involved[2-4]. The lesion has a lytic center with well defined margins, surrounded by reactive sclerosis. A sequestrum may be present. The more superficial lesions tend to have more periosteal reaction. To our knowledge, the presence of an air-fluid level has not previously been described in a non-instrumented lesion.

The findings on computed tomography were unexpected, since both clinically and radiographically there was no sign of such extensive anterior bone loss. This suggests that computed tomography may prove useful in the delineation of the extent of lesions of the long bones.

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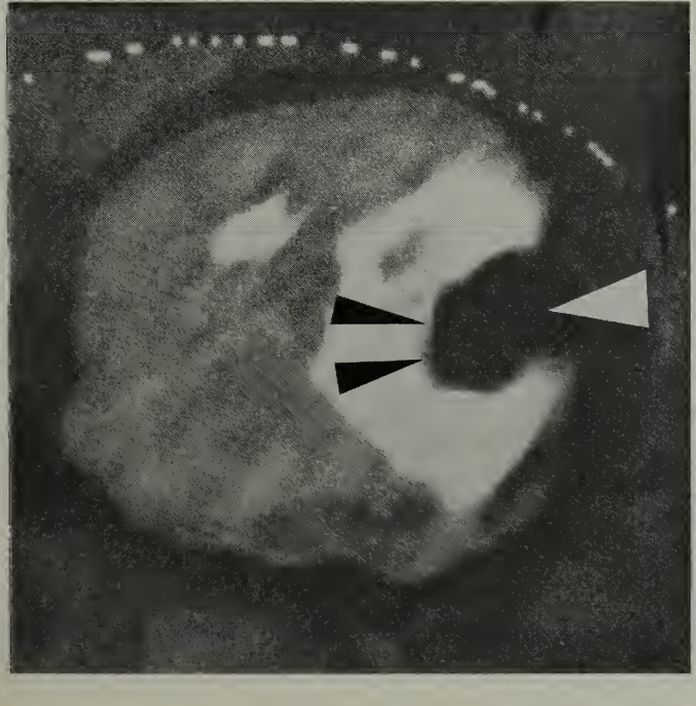
Submitted 12-16-77.

The author appreciates the assistance of P. Kornegay, K. Caldwell, S. Thomas, P. Rogers, and Dr. J. Schulz in the preparation of this manuscript.



Fig. 1. Horizontal beam lateral (above) and AP (right) radiographs show lucent abscess cavity with air fluid level (arrow) and surrounding sclerosis. Anterior cortical bone appears thinned but intact (double arrows).

Fig. 2. Total loss of anterior cortical bone is clear (single arrow); air fluid level is well demonstrated (double arrows).





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Of the many books on writing, there are two the Editors find of particular merit. One is *The Elements of Style,* by William Strunk, Jr., and E. B. White (MacMillan, softcover $1.65). This extraordinary little book, first published in the 50's, is a national primer. The other, a recent entry, is *On Writing Well,* by William Zinsser (Harper & Row, softcover $5.50). This is a lengthier volume, but it is still a quick study, and a valuable one. Both of these books are a joy to read; the authors practice what they preach, and their writing is clear and vigorous. The principles they offer are easy to grasp; all are illustrated vividly (and often amusingly) with before-and-after or right-and-wrong examples. Treat yourself to one or both of these books. You'll be glad you did.

ADVICE TO AUTHORS

Editors' Note: If the recommended Zinsser work, *On Writing Well*, is not carried by your bookstore, send your check for $5.50 to Harper & Row, Atten: Mail Order, 10 E. 53rd St., New York, NY 10022.

Fat Stripe: Aid in Diagnosing Distal Radial Fractures

Theodore E. Keats, MD, Charlottesville, Virginia

FRACTURES of the distal radius through the epiphyseal line (Salter-Harris Type I) are often overlooked radiologically because of lack of dislocation of the epiphysis. The traumatic shear through the cartilagenous growth plate leads to dislocation of the epiphysis, which then snaps back into place, leaving little evidence of the fracture. If one is sufficiently acute he may recognize the usual residual widening of the epiphyseal line but, without comparison views of the opposite side, this, too, may be overlooked.

An additional clue to the possible presence of an epiphyseal fracture, which should, in turn, lead to a comparison examination of the opposite side, is distortion of the fat plane over the pronator quadratus muscle (Figure 2). This fat stripe is visible in most wrists and serves as a useful sign of deep soft tissue swelling which usually accompanies an epiphyseal fracture. Figure 1 shows the injured left wrist of a 12-year-old girl whose roentgen examination looks quite normal on cursory examination. Inspection of the soft tissues, however, shows volar bowing of the pronator quadratus fat stripe. A comparison view of the opposite wrist was obtained which confirms the distortion of the fat stripe and, in addition, indicates that the epiphyseal line of the injured wrist is widened, in turn confirming the presence of a fracture through the epiphyseal plate.

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Submitted 6-9-77.

The pronator quadratus fat sign is a simple but neglected indicator of injury which serves to alert the physician to the need for comparison views of the opposite wrist in order to evaluate the possibility of a fracture through the epiphyseal line. The sign is also useful in indicating the need for careful search for subtile fractures of the metaphysis proximal to the epiphysis, as well.

Reference

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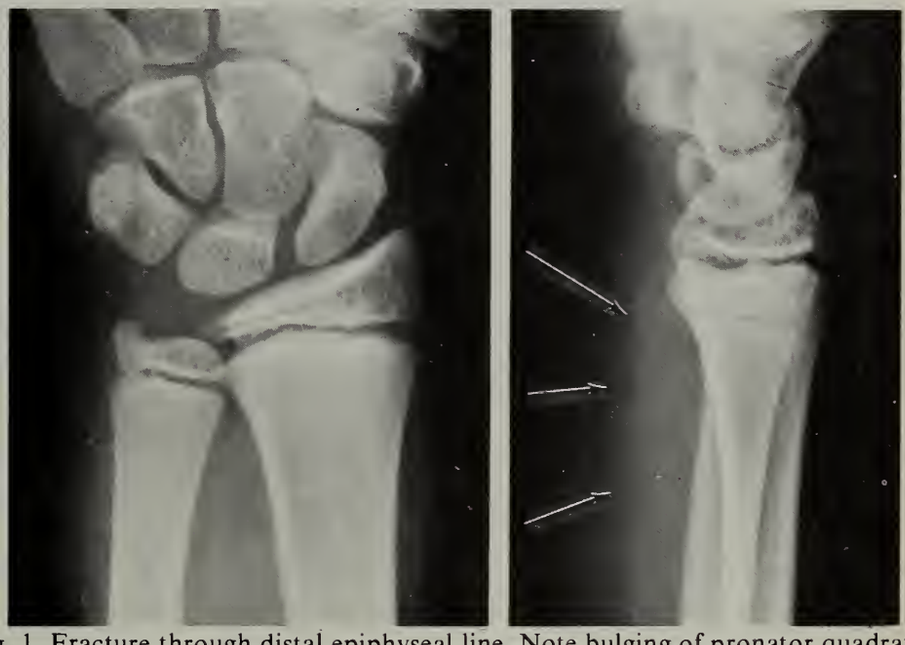


Fig. 1. Fracture through distal epiphyseal line. Note bulging of pronator quadratus fat stripe, seen in lateral projection, and widening of epiphyseal line, seen in frontal projection, in comparison with opposite wrist (Fig. 2).

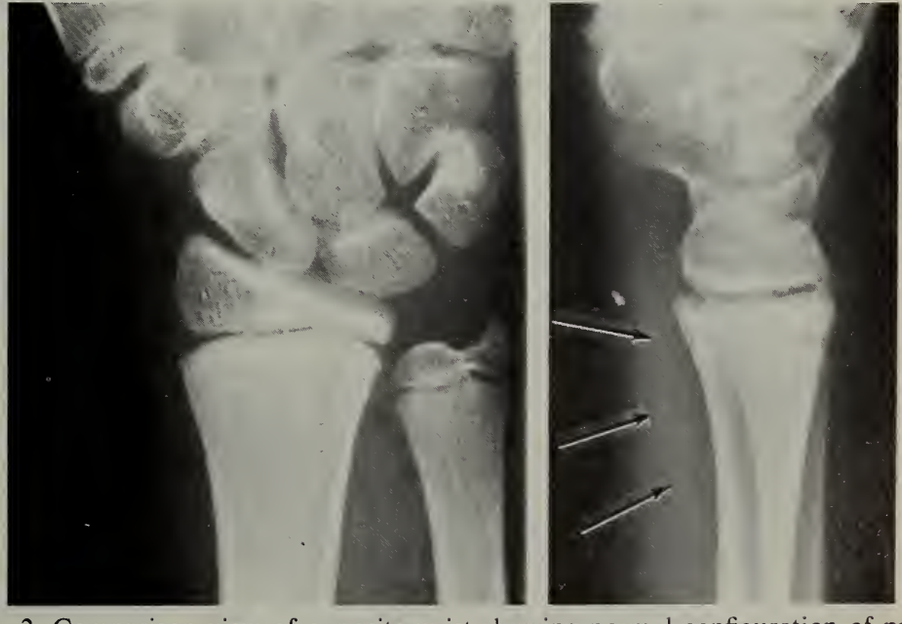


Fig. 2. Comparison view of opposite wrist showing normal configuration of pronator quadratus fat stripe and normal width of epiphyseal plate.

Thyroid Surgery and Vocal Cord Paralysis

Robert A. Jahrsdoerfer, MD, and Robert W. Cantrell, MD,
Charlottesville, Virginia

The vulnerability of the recurrent laryngeal nerve is well understood by the thyroid surgeon. The authors discuss vocal cord paralysis in this context and describe corrective techniques.

THE INCIDENCE of vocal cord paralysis from injury to the recurrent laryngeal nerve at the time of thyroid surgery has been reported to be 0.3-7%[1]. While this incidence is low, it is by far the most common cause of vocal cord paralysis. Recent reports in the literature of surgery to correct the symptoms of vocal cord paralysis confirm this statement. Sessions et al[2] noted that thyroidectomy was the reason for bilateral vocal cord paralysis in 30/55 patients. Newman and Work[3] recently reported that 22/23 patients undergoing arytenoidectomy for bilateral vocal cord paralysis had incurred their laryngeal nerve injury during thyroid surgery.

The vulnerability of the recurrent laryngeal nerve is well understood by the thyroid surgeon. The left recurrent laryngeal nerve arises from the vagus nerve, the longest cranial nerve in the body, loops beneath the arch of the aorta, and then ascends superiorly in the groove between the esophagus and the trachea to enter the crico-thyroid membrane. It then innervates the intrinsic musculature of the larynx. On the right side, the course of the nerve is somewhat shorter, looping around the right subclavian artery, before ascending to the larynx. Both nerves run beneath the respective lobes of the thyroid gland before reaching the larynx. It is here that they are most vunerable to injury during thyroid surgery (Fig. 1). It is stressed, however, that this calamity may befall the most skillful surgeon despite his best efforts in identifying and preserving the nerve.

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Presented at the annual meeting of the American College of Surgeons, Virginia Chapter, Richmond, April 1, 1977.

Unilateral vocal cord paralysis characteristically leaves the patient with a weak and breathy voice but an adequate airway. The contralateral vocal cord functioning normally may compensate for the paralyzed side and, in time, cross the midline to meet the nonfunctioning cord. The voice will improve, and the unwary surgeon may assume that a paretic vocal cord has regained its function and that all is well. Not only is all not well, but the problem may be compounded if additional thyroid surgery is necessary and the contralateral, uninjured, recurrent laryngeal nerve subjected to trauma. From the foregoing, one can see the necessity of pre- and post-operative mirror examination of the larynx to assess vocal cord function.

Bilateral vocal cord paralysis may go unnoticed for a considerable length of time. In Newman and Work's series, fewer than one-fourth of the cases had their paralyses diagnosed in the immediate post-operative period. Eleven of the 22 patients initially noticed only mild to moderate dyspnea, and two patients went 17 and 18 years respectively before shortness of breath intervened.

The cords may be fixed in close enough proximity that phonation remains good. The laryngeal airway may be marginal, but is well tolerated in the healthy young adult; with age, however, a compromising car-

diovascular system may demand more of the body, with the result that the patient develops dyspnea on exertion. He may then seek medical attention.

The reason for the delay in the onset of symptoms can be physiologically explained. Immediately after injury to the recurrent laryngeal nerve, the vocal cord assumes an intermediate or paramedian position. After a varying period of time, the crico-thyroid and inter-arytenoid muscles cause the vocal cord, or cords, to adduct, and to assume a position near the midline. The crico-thyroid muscle is innervated by the superior laryngeal nerve, and the inter-arytenoid muscle is bilaterally innervated by the recurrent laryngeal nerve. If the injury to the recurrent laryngeal nerve is bilateral, the midline position of the cords may obstruct the airway and necessitate an emergency tracheotomy. This may be perplexing to the surgeon who is reluctant to blame the need for tracheotomy on thyroid surgery performed weeks or months earlier.

Surgical Correction

There are many surgical techniques whereby an attempt may be made to correct bilateral vocal cord paralyses. In the immediate postoperative period, the recognition of vocal cord paralysis may prompt the surgeon to reexplore the wound. If a recurrent laryngeal nerve is found to be included in a suture ligature and released, there is a possibility that normal function may return. Immediate postoperative decompression of a recurrent laryngeal nerve has had some small measure of success in the past. A transected nerve may be repaired by end-to-end anastomosis, or interpositional nerve graft, with occasional satisfactory results. The surgeon should not be overly optimistic in any of these procedures, however. The net results have been discouraging and unpredicable. In those cases wherein reinnervation has been established, it has usually resulted in inappropriate movement of the vocal cords. Tucker[4] has explained the reasons for this. When a recurrent laryngeal nerve is transected, or severely traumatized, there is axonal degeneration retrograde to the motor nucleus. In this case, the motor site is the nucleus ambiguus. By the time new fibers make their way to the site of injury, scarring and fibrosis has occurred, and the nerve fibers cannot readily pass. Neuroma formation is not uncommon.

Another reason for poor return of function concerns the distribution of adductor to abductor fibers in the recurrent laryngeal nerve. This is usually in a ratio of approximately 3:1. Those nerve fibers that successfully reach the larynx may well innervate the wrong motor end plate. The end result may be adductor fibers to abductor muscles with inappropriate stimulation and dyssynergia.



Fig. 1. Thyroidectomy with radical neck dissection. Note recurrent laryngeal nerve on right (arrow).

Surgery for the correction of bilateral vocal cord paralysis strives for a good airway and an adequate voice. Usually one is sacrificed at the expense of the other. In the past, most operative procedures—arytenoidectomy or arytenoidpexy, for example—involved one vocal cord being tacked laterally. The optimal result would be to increase the glottic area, improve the airway, and allow discontinuation of the tracheotomy tube. Ideally, a good airway is achieved, and the voice, although weak and breathy, is serviceable. The inherent limitations with these procedures have stimulated researchers to seek a better way.

In 1976, Tucker reported a new procedure for reinnervation of the human larynx. The technique involved transplanting a nerve-muscle pedicle from the omohyoid muscle to the posterior crico-arytenoid muscle. The nerve selected is from a branch of the ansa hypoglossi, a purely motor nerve, which fires on inspiration. Following successful completion of this operation, the patient will usually show some abductor motion to the vocal cord in 6-8 weeks. There should also be a subjective improvement in his air-

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way. The results have been good in those patients Tucker has operated upon to date. In the patients thus far operated upon at the University of Virginia, the results have been encouraging.

Should this procedure continue to show consistently good results in the establishment of a laryngeal airway and the maintenance of an adequate voice, it may well become the procedure of choice. If so, it will give the thyroid surgeon a means of helping that patient who has sustained an inadvertent injury to the recurrent laryngeal nerve.

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VIRGINIA AUTHORS

Effect of Antilymphocyte-Globulin Potency on Survival of Cadaver Renal Transplants. FRANCIS T. THOMAS, MD, JUDITH M. THOMAS, PhD, ROGER E. FLORA, PhD, GERARDO MENDEZ-PICON, MD, KARL E. PEACE, PhD, and H. M. LEE, MD, *Richmond.*

Seventy-one recipients of cadaver primary and secondary renal transplants were investigated in a prospective randomised double-blind study. Patients were given one of two rabbit antilymphocyte globulin (A.L.G.) preparations made by similar techniques but differing in potency as measured by skin-graft prolongation in rhesus monkeys. Patient selection and management were otherwise similar. A statistically significant difference ($p<0.05$) in graft survival (78% *vs.* 42%) developed between the two groups at a mean follow-up of 18.4 months and patient entry into the study was terminated. After a 3.5 year interval from the start of the trial the double-blind code was broken. It was found that the high-potency-A.L.G. group had better graft survival and fewer rejection episodes ($p<0.05$) than the moderate-potency group. The results suggest that preclinical testing of A.L.G. by the primate skin graft test can be a valid indicator of the potential efficacy of an A.L.G. preparation in renal-transplant recipients. It is suggested that quality-control standards may improve the clinical results of A.L.G. therapy. Lancet, October, 1977, pp 671-674

Morbidity/Mortality and Economics of Hospital-Acquired Blood Stream Infections: a Controlled Study. RICHARD ROSE, MD, *Atlanta, Georgia,* and KATHRYN J. HUNTING, RN, TIMOTHY R. TOWNSEND, MD, and RICHARD P. WENZEL, MD, *Charlottesville.*

A controlled study of mortality, length of hospital stay, and cost of hospitalization in 40 patients with hospital-acquired blood stream infections and 40 similarly ill patients without blood stream infections was done. Patients with septicemia were identified by ongoing routine surveillance, while controls were selected from computer surveys of similarly aged patients matched for primary diagnosis or operation or both. Bacteremic cases for which no matched controls could be obtained and 109 additional cases of blood stream infection occurring after the study period were also characterized to determine any gross bias in the process of case selection. Mortality in bacteremic patients was 38% compared to 10% in controls; median hospital stay was 33 days for bacteremic patients and cost was $6,692, compared to 14 days' hospitalization and $2,322 cost for controls. Mortality among the unmatched cases as well as the 109 additional cases was 34%. The excess morbidity, mortality, and hospitalization costs offer a better estimate of the direct effects of the hospital-acquired blood stream infection. Southern Med J 70:1267-1269, 1977

Treatment of Chlordecone (Kepone) Toxicity with Cholestyramine: Results of a Controlled Clinical Trial. WILLIAM J. COHN, MD, JAMES J. BOYLAN, MD, ROBERT V. BLANKE, PhD, MARC W. FARISS, BS, JOHN R. HOWELL, MS, and PHILIP S. GUZELIAN, MD, *Richmond.*

Industrial workers exposed to the organochlorine pesticide, chlordecone (Kepone), had signs of toxicity in several organs. The extent of toxicity was proportional to the levels of this chemical in the tissues. In 22 patients, chlordecone was eliminated slowly from blood (half time of 165 ± 27 days—mean ± S.E.M.) and fat (half time of 125 days, with a range of 97 to 177), chiefly in the stool. Output of chlordecone in bile was 10 to 20 times greater than in stool, suggesting that chlordecone is reabsorbed in the intestine. Cholestyramine, an anion-exchange resin that binds chlordecone, increased its fecal excretion by seven times. In a five-month trial, cholestyramine significantly accelerated elimination of chlordecone from blood, with a half life of 80 ± 4 days (S.E.M.) ($P < 0.005$) and fat (half life of 64 days, with a range of 52 to 85) ($P < 0.05$). Cholestyramine offers a practical means for detoxification of persons exposed to chlordecone and possibly to other lipophilic toxins. N Engl J Med 298:243-248, 1978.

Normal Hematologic Values Obtained with a Coulter Counter, Model S. IRA D. GODWIN, MD, *Fairfax,* and JUDITH A. JENCKS, MS, MT, *Norfolk.*

A survey was made of hematologic values obtained with the Coulter Counter, Model S, at American Medical Laboratories, Inc. Blood specimens from 6,887 outpatient men, women, and children were analyzed according to age and sex. Patients being seen by nephrologists, hematologists, and oncologists were excluded from the study. The mean values for white blood cell counts, mean corpuscular volume, mean corpuscular hemoglobin, and mean corpuscular hemoglobin concentration correlated well with values frequently quoted as normal. However, the mean

values for hemoglobin, hematocrit, and red blood cell counts were slightly lower than the commonly accepted normal mean values. This may be a result of newer and more accurate methods of hematologic analysis. South Med J 71:47-49, 1978

New Trends in the Management of Diabetic Ketoacidosis. James M. Moss, MD, *Washington DC,* and H. St. George Tucker, MD, *Richmond.*

The diagnosis of ketoacidosis can be rapidly confirmed by simple determinations of blood glucose, serum ketones and arterial pH. The initial hydrating fluid is isotonic saline, followed by half-normal saline with buffered potassium phosphate. As soon as the blood glucose drops below 300 mg%, 5% glucose is added to the infusion. Following an initial regular insulin dose of 20 units IM or 10 units IV, subsequent doses of 10 units every hour are given either by intravenous drip or by injection deep into the deltoid muscle. Am Fam Physician 17:111-118, 1978

Intrascleral Enucleation: a New Surgical Technique. Khalid J. Awan, MD, *Norton, Virginia.*

Intrascleral enucleation, a new technique of excising the eyeball, is described. Following the reflection of the conjunctiva toward the fornices, four flaps of the superficial, half the thickness of sclera, are dissected backward from the limbus in such a way that each flap has one rectus muscle attached to it on the external side. The integrity of Tenon's capsule remains intact, and the rectus muscles are not traumatized or displaced from their physiologic location. A cap of sclera also is formed in front of the implant and safeguards against its extrusion. Because of the likely but avoidable complication of the perforation of the globe, the choice of intrascleral enucleation must be thoroughly evaluated in situations where this complication is undesirable. Arch Ophthalmol 95:2041-2042, 1977

Unusual Cutaneous Manifestations of Sarcoidosis. Kenneth E. Greer, MD, Louis E. Harman, Jr., MD, and Allan L. Kayne, MD, *Charlottesville, Virginia.*

The diagnosis of sarcoidosis is best established when there is evidence of granulomatous involvement in two or more organs. Three patients with unusual cutaneous manifestations of sarcoidosis, including palmar and follicular lesions, nonscarring alopecia, and widespread plaque or erythrodermic sarcoidosis, are reported. In all three patients the skin biopsy was important in establishing the diagnosis. Southern Med J 70:666-668, 1977

Vascular Changes in Leg Trauma. Clark D. Moore, MD, and John A. Cardea, MD, *Richmond.*

Fifteen patients with closed fractures of the distal tibia and fibula had marked elevations of initial compartment pressures. The pressures remained elevated for five days in the ten patients treated by cast and elevation. The pressures returned to normal within 24 hours in the five patients placed in a prototype water-jacketed boot which provides cooling and intermittent compression. Some patients exhibited arteriographic evidence of vascular injury. Southern Med J 70:1285-1286, 1977

Nonunion of the Femoral Neck and Avascular Necrosis of the Femoral Head: Treatment with Bone Grafts. Richard L. Gaertner, MD, and William Minor Deyerle, MD, *Richmond, Virginia.*

The use of full-thickness iliac bone grafts shaped into cigar and cigarette forms in the treatment of nonunion of the femoral neck and idiopathic avascular necrosis of the femoral head was studied. Results of 36 operations (18 hips in each category) were classified according to pain, range of motion, function, and roentgenographic appearance. Followup with a two-year minimum revealed that bone grafting contributed to a successful result in the nonunion group with 17 hips uniting. Thirteen hips with avascular necrosis, however, showed progression of disease and were classified as failures. In light of these results, bone grafting in the treatment of idiopathic avascular necrosis must be questioned. Southern Med J 70:1039-1042, 1977

Nonhemorrhagic Decrements in Hematocrit Values after Percutaneous Renal Biopsy. W. Kline Bolton, MD, *Charlottesville, Virginia.*

Seventy patients without bleeding after a percutaneous renal biopsy (PCB) were studied to define the incidence of decrements in hematocrit values, hypotension, and bradycardia. Hematocrit values decreased $\geq 0.5\%$ in 60% of the patients, $\geq 1\%$ in 44%, and $\geq 2\%$ in 34% of patients. After PCB, an increase of $\geq 1\%$ occurred in 55% of the patients with hematocrit nadirs of $\geq 1\%$. Hematocrit values increased $3.0\% \pm 0.6\%$ in 8/19 patients with a previous decrease of $\geq 2\%$ but continued to decrease in 13% of the patients. A weight gain or positive fluid balance occurred in 29%, hypotension in 7%, and relative bradycardia in 4% of the patients. These studies show that a decrease in hematocrit values and hypotension may occur in patients after PCB without bleeding. This may result from hemodilution and increased parasympathetic discharge and as part of a natural spectrum of decreasing hematocrit levels coincident with PCB. JAMA 238:1266-1268, 1977

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There is no experience in pregnant women who have received this drug.

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The Medical Society of Virginia
PROCEEDINGS

Minutes of the Council

A meeting of the Council of The Medical Society of Virginia was held in Richmond at the Hyatt House on Saturday, February 4, 1978.

Members Present: Dr. William J. Hagood, Jr; Dr. Charles E. Davis; Dr. W. Leonard Weyl; Dr. James B. Kenley, Ex-Officio; Dr. K. K. Wallace, Jr.; Dr. Harold L. Williams; Dr. Gervas S. Taylor, Jr.; Dr. Gordon G. Birdsong; Dr. Girard V. Thompson, Sr.; Dr. H. C. Alexander, III; Dr. Robert C. Green, Jr.; Dr. Harry C. Kuykendall; Dr. Robert V. Gailliot; and Dr. C. Barrie Cook

Others Present: Dr. George E. Broman, 2nd Vice President; Dr. Richard L. Fields, Vice-Speaker; Dr. William S. Burton, Dr. Frederick K. McCune, Dr. J. Latane Ware, Dr. Charles H. Crowder, Jr., Dr. William R. Watkins, Dr. James B. Jones, Dr. Harvey D. Smallwood, Dr. Nicholas G. Colletti, Dr. James L. Patterson, Jr., and Dr. Gerald J. Fisher, Vice-Councilors; Dr. Carl E. Stark, Dr. F. Ashton Carmines and Dr. John A. Martin, AMA Delegates; Dr. Raymond S. Brown, Dr. Percy Wootton and Dr. Arthur A. Kirk, Alternate AMA Delegates; Dr. James S. Kitterman, President, Norfolk Academy of Medicine; Dr. Daniel Mohler, representing Dr. Norman J. Knorr, Dean, University of Virginia School of Medicine; Dr. Reuben Young, representing Dr. Jesse L. Steinfeld, Dean, Medical College of Virginia; Dr. William S. Hotchkiss, Member AMA Judicial Council; Mrs. William N. Gordge, President, The Medical Society of Virginia Auxiliary; Miss Othella T. Owens, President, Student Medical Association of MCV; Mr. Robert G. Stuart, Executive Secretary, VaMPAC; Mr. Allen Goolsby, Attorney for the Society; Mr. Edward S. DeBolt and Ms. Gail Crane.

President's Remarks.

Dr. Hagood brought Council up-to-date on his activities—particularly those having to do with legislation. In addition to testifying before a committee of the General Assembly, he was one of those chosen to testify before the Rogers Sub-Committee in Washington on the current Federal Health Planning Act. In this connection, Dr. Hagood expressed appreciation for the work and assistance of Congressman Satterfield in making it possible for medicine to review proposed amendments contained in the Health Planning Act and make its recommendations known.

The President then commented on how attendance at Council meetings has grown. He stated that it has become obvious that comments must be restricted as much as possible to voting members of Council. There will, of course, be exceptions to the rule and guidelines governing future meetings are expected to be prepared and distributed in the not too distant future.

Vanguard Update.

Dr. Fields, Chairman of the Society's new Vanguard Committee, reported that a number of meetings had already been held. Its activities are largely concerned with PL 93-641 (Health Planning) and a number of objectives have been agreed upon. Members of Council in all of Virginia's health service areas have been briefed concerning the Committee's goals and activities and the various HSA proposals and implementation plans have been analyzed.

Dr. Fields stated that the health planning issue is perhaps the most important ever to confront the medical profession. It is paramount that physicians realize that quality of care must not be sacrificed because of federal intervention.

The Chairman went on to offer two key recommendations. The first would establish local Vanguard Committees in each component society. The second called for the employment of full time staff personnel to provide the expertise needed to accomplish the

Committee's objectives. In addition to the employment of a Committee Executive Secretary and Administrative Assistant, the Society would also contract with Medical Service Consultants, Inc. and Ed. DeBolt to provide special back-up assistance.

It was then moved and seconded that the Committee's two recommendations be adopted. During the discussion period, Dr. George Contis, of Medical Service Consultants, emphasized again the seriousness of the situation and its potential impact on the practice of medicine.

Mr. Joel Levine, also of Medical Service Consultants, commented on the present law and the various health service plans it has spawned. He pointed out that these plans normally require a review period of two weeks, if the job is to be done thoroughly and properly. He called attention to just how far some of the plans would go, even to imposing a moratorium on health service proposals and activities in certain areas of the state. Mr. Levine went on to discuss HSA annual implementation plans and how medicine has assumed a reactive stance up until this point. He stressed the fact that the profession must become more active where future plans and amendments are concerned. It was also brought out that HSA's are concerning themselves with just about every facet of the health delivery system—even decertification.

Council was reminded that HSA's are very much consumer oriented and that the provision in the law pertaining to providers is quite misleading. For example, the definition of direct providers is very broad and reduces physician participation tremendously. Council was surprised to learn that HSA's are financed by HEW to the extent of 1.7 million dollars per agency.

Dr. Contis then presented his recommendations with reference to consultant activities. The recommendations were concerned with indepth reviews of HSA plans, development of strategy, establishment of tracking and monitoring systems, preparation of "issue reports," monthly newsletters for all physicians, identification of those actions to be taken at state and national levels, etc.

Mr. DeBolt stated that Virginia has become a leader where PSRO and HSA's are concerned. He stated that a concerted effort by the profession is the only effective approach to the control of these programs and that physicians must have facts. He went on to say that a well conducted survey is vital if we are to determine the level of knowledge existing among physicians at this time. Only in this way can a truly effective educational program be devised.

Dr. Fields stated that programs of this kind cost money and proceeded to present a proposed budget amounting to approximately $119,000. Attention was called to the fact that Texas was spending approximately $1,000,000 in a similar effort.

Dr. Weyl stated that, in his opinion, Virginia physicians would not hesitate to support the program once they really understand what is at stake. The thought was expressed that an assessment is in order at this time and that a dues increase will, in all likelihood, be found necessary when the House meets in November.

The motion calling for approval of the Vanguard Committee's two recommendations was then unanimously adopted.

A motion by Dr. Weyl calling for an assessment of $50 to cover the immediate cost of the proposed program was seconded and unanimously adopted. It was agreed that the assessment notice would be accompanied by a letter of explanation over the signature of Dr. Hagood.

Legislative Update.

Mr. Goolsby reported that the Legislative Committee was concerned with approximately 58 items currently before the General Assembly. Those of particular interest include Risk Management, stiffer penalties for practicing without a license, suspension of license while awaiting appeal on a felony conviction, cost review, public health, optometry, etc. Mr. Goolsby noted that a laetrile bill had not yet been introduced. Neither has there been any indication that new legislation will be introduced pertaining to death with dignity. A question was raised concerning the statute of limitations for minors and it was learned that the Legislative Committee does not plan to press the matter this session. There was some feeling that perhaps this action conflicts with the wish of the House of Delegates. It was the consensus, however, that Council and the Legislative Committee are always justified in taking such action as they believe advisable in view of new facts and information.

Council was also advised that legislation having to do with second surgical opinions would be opposed.

State Board of Health.

The Virginia Veterinary Medical Association has requested The Medical Society of Virginia to support its efforts to add a veterinarian to the State Board of Health. The Association feels strongly that veterinarians play an important role in maintaining and promoting human health. It points out that whenever veterinarian's preventive efforts have been relaxed, increases in human disease have resulted.

Following considerable discussion, Dr. Weyl moved that the Society support the request of the Veterinary Association. The motion was seconded. Some fear was expressed that the addition of a veteri-

narian to the Board might set an unfortunate precedent. A vote was then taken and the motion was defeated.

Executions.

The attention of Council was called to a proposed new method of execution currently under consideration by the General Assembly. Since the new method would involve execution by injection, it raises a question as to the role of the physician.

The Executive Committee had given considerable thought to the matter and recommended to Council that no official position be taken. It brought out the fact that physicians, under the proposed legislation, would not be required to serve as executioners.

A motion approving the recommendation of the Executive Committee was seconded and carried.

At this point the question of a possible conflict between the Legislative Committee and House of Delegates with reference to the statute of limitations for minors was again raised. In order to clarify this situation, Dr. Weyl moved that Council concur with the recommendation of our Legislative Committee and lobbyists to defer action on the statute of limitations at least until next year. The motion was seconded and adopted.

Congressional Luncheon.

Council was advised that the time had come once again to decide whether to continue the Society's annual congressional luncheon. The luncheons are normally held in Washington sometime in late April or early May.

Dr. Hagood expressed the opinion that the luncheons should serve a definite purpose and be well worth the time of everyone concerned. Consequently, he proposed that the ceremonial aspects of the luncheon be held to a minimum and that a meaningful presentation be prepared pointing out to our Congressional delegation our continuing problems with HEW. He proposed to touch on such matters as HEW guidelines and timetables, inaccurate statistics, confusing and misleading language in various directives, etc. Our senators and congressmen would be asked for their thoughts as to how this worsening situation can be corrected.

There was considerable discussion as to who should attend the luncheon and it was agreed that Virginia's AMA delegates and the Speaker of the House should certainly be included. It was agreed that the list of those to be invited should be reviewed very carefully by the President. A motion by Dr. Kuykedall calling for the luncheon to be held again this year was seconded and adopted.

Candidacy of Dr. Hotchkiss.

The candidacy of Dr. Hotchkiss for election to the AMA Board of Trustees was discussed in order that a decision might be made concerning the type of campaign to be waged. Dr. Stark called for the Society's all out support and stated that, in his opinion, Dr. Hotchkiss had an excellent chance of being elected. It was pointed out that such campaigns cost money and that financial assistance is a must. A motion by Dr. Cook appropriating an amount not to exceed $5,000 to help with the campaign was seconded and unanimously adopted.

1979 Annual Meeting.

Dr. Davis reported that he and members of the staff have been in contact with the Homestead concerning the 1979 Annual Meeting. It was recalled that some concern had been voiced over the rates being charged by the hotel at this particular time. Also, there have been rumors of a deterioration in service, double charging resulting from the American Plan, etc.

Dr. Davis has found Homestead officials to be most cooperative and very anxious to iron out any problems which might exist. One problem could be solved by meeting at the Homestead from November 1-4 rather than in October as previously planned. Since special rates go into effect on November 1, savings to the individual member would be quite significant.

After further discussion, it was moved by Dr. Davis that the dates of the 1979 Annual Meeting be changed to November 1-4. The motion was seconded and carried.

Insurance Committee.

The Insurance Committee, during its most recent meeting, agreed upon several recommendations to be presented to Council. Its first recommendation was that the Society agree to sponsor a combination motor vehicle leasing and member loan plan administered by Commercial Credit Company. Dr. Davis reported that the company enjoyed an excellent reputation and that the program carried no risk for the Society. He went on to say that the member loan program would undoubtedly be quite attractive to the younger physician.

A motion by Dr. Davis to endorse and sponsor the program was seconded and adopted.

Mr. Moore then reported that although the Society's Blue Cross-Blue Shield program had operated in the black during the past year, the various inflationary and trend factors dictated a 15% premium increase. He stated that the Insurance Committee recommended that the Society plan be

amended to provide for UCR payments for out-of-state services, payment for medical emergencies (outpatient), and a return to a longer period of coverage for nervous and mental conditions.

Following considerable discussion, it was determined that the Committee's recommendations should be adopted and that the length of coverage for nervous and mental conditions be increased to 365 days. This would increase the total monthly premium for a family to $97.66. A motion by Dr. Taylor approving the Committee report was seconded and adopted.

It was suggested that a written definition of "medical emergencies" be obtained for the record from Blue Shield of Virginia.

Dr. Kuykendall then recalled that some carriers (other than St. Paul), writing professional liability coverage, were charging rates which could not readily be defended or explained. Dr. Davis reported that he continues to be in touch with Commissioner Day on the matter. Mention was made of the fact that Virginia's experience where medical malpractice is concerned does not appear to be as good as it was a year ago.

Professional Liability Limits.

It came as some surprise to learn that only about 50% of all Virginia physicians carry professional liability coverage in excess of $100,000/300,000. It has been suggested that the Society do everything it can to impress its members with the importance of carrying excess coverage of at least $500,000-1,000,000. It was agreed that special articles on the subject should be published in VIRGINIA MEDICAL as well as *What's Up Doc?*

1978 Annual Meeting.

The Committee on Arrangements for the 1978 Annual Meeting recommends that the meeting format be changed in such manner as to hold reference committee hearings on Friday morning rather than afternoon. By beginning these hearings at 9:30 AM, they very likely could be completed prior to the various luncheons. There would also be sufficient time to caucus prior to the hearings.

It was agreed that such a format change deserved a try and no objections could be found. It was also agreed that authorizing such a change was the Speaker's prerogative.

There were those who expressed some reservation about continuing Sunday morning programs. It was suggested that the Committee on Arrangements and Program Committee both consider the advisability and feasibility of scheduling scientific sessions on Thursday morning rather than Sunday.

Conference on Hospital-Physician Relations.

The annual Spring conference of the Virginia Hospital Association will be held in Williamsburg from April 12-14. The Medical Society of Virginia has been invited to be a co-sponsor. Sessions will be devoted to such topics as management decisions affecting the medical staff, cost containment, professional standards review, governmental activities, and how to resolve hospital-physician conflicts.

It was agreed that the Conference, designed especially for medical staff representatives and hospital administrators, will be a most interesting one.

Membership.

Dr. Hagood is in the process of gathering detailed statistics concerning Society, AMA and VaMPAC membership. Thus far, he is surprised and appalled by what he has learned. In an effort to improve the situation, the President is appointing an *ad hoc* commission on membership. The committee will be under the direction of Dr. Alexander and will be composed of all vice-councilors.

Public Relations Project.

Council, during its November meeting, asked the Lynchburg Academy of Medicine to study the feasibility of sponsoring a TV public relations project as advocated by the Burroughs Welcome Corporation. The project is designed to be administered by local medical societies and the TV presentations are educational in nature.

Dr. Hagood reported that the Lynchburg Academy of Medicine is quite encouraged by the support it has found for the project and will quite likely begin the operational phase in the very near future.

VaMPAC.

Dr. Weyl informed Council that the first official VaMPAC newsletter would be mailed within the next few days. The newsletter will be called PACER and is designed to bridge the communications gap between VaMPAC and Virginia physicians. He stated that VaMPAC now has 1250 members in the state—considerably below its goal. He expressed the hope that all members of Council will work very hard to increase the number of VaMPAC members in their districts.

AMA Jail Project.

Both AMA and certain law enforcement agencies of the State have approached The Medical Society of Virginia concerning its possible participation in the recently expanded AMA program to improve medical care and health services in jails. AMA will bring its program to Virginia if the Society will express its

approval and issue an official invitation. Although the Society would be expected to make a staff person available to the program on a part-time basis, all expenses would be borne by AMA.

Dr. Kenley stated that the Department of Health is intensely interested in the project and would cooperate with the Society in every possible manner. Hope was expressed that the Department of Health might have a staff person who could be made available for the project.

Both Dr. Hagood and Dr. Stark mentioned the advisability of making sure that chiefs of police and/or sheriffs are always contacted about various projects within their jurisdictions. It is of the utmost importance that they be made knowledgeable concerning the project and that their approval be obtained.

A motion by Dr. Gailliot to approve and implement the program in Virginia was seconded and adopted.

Specialty Societies.

All specialty groups within the state have been contacted concerning just how The Medical Society of Virginia might be of assistance. It was recalled that the Society had been approached as to its willingness to provide certain secretarial services on a cost basis.

Two specialty groups have stated definitely that they would like to avail themselves to such services. Seven others have indicated an interest and will make a final decision during the Spring. There was considerable discussion concerning the necessity for ground rules and the advisability of initially providing such services on a trial basis. A question was then raised as to whether contracts between the various parties would be advisable.

A motion was offered by Dr. Cook approving such a program of assistance with the understanding that it would be self-sustaining and in keeping with an agreement to be drawn by Mr. Goolsby. The motion was seconded and carried.

Fee Differential.

The Danville-Pittsylvania Academy of Medicine recently adopted a Resolution requesting the assistance of The Medical Society of Virginia in its effort to have third-party carriers use one fee scale throughout the state. It was agreed that the matter should be referred to the Insurance Committee for study and recommendation, and a motion to this effect was seconded and carried.

Dr. Colletti indicated that the Prince William County Medical Society has had some experience with matters of this kind and would be pleased to be of assistance.

Joint Professional Relations Committee.

Eight recommendations from the Joint Professional Relations Committee were considered by the House of Delegates last October. Three of those recommendations were adopted, several were amended, one was deleted and one referred back to the Committee for clarification. The Committee believed that a fresh start might be best for everyone and reviewed all of the recommendations previously submitted to the House. As a result of this review, six revised recommendations were submitted to Council for its consideration.

Dr. Hagood reported that the Executive Committee had discussed this particular matter at great length and believed that the new recommendations should properly be referred directly to the House. This could be accomplished by including the recommendations in the Committee's annual report. A motion approving the Executive Committee's recommendations was seconded and carried.

Medicare-Medicaid.

Dr. Ware asked if The Medical Society of Virginia might be planning to respond to the next list of physicians which HEW will release in connection with Medicare/Medicaid payments. The last list was roundly criticized across the nation because of its numerous inaccuracies and misleading information.

Council was advised that an AMA bulletin just received indicated that release of the next list had been postponed by HEW for an indefinite period of time.

There being no further business, the meeting was adjourned.

Robert I. Howard, Secretary

APPROVED:
William J. Hagood, Jr., MD, President

The House That Doctor Hubard Built



This handsome house in Buckingham County, Virginia, was built in 1805 by a physician, Dr. James Thurston Hubard, as his residence. He named it "Saratoga", after the famous battle of the Revolutionary War.

Doctor Hubard was born in the year the Revolutionary War began—on March 13, 1776, in Petersburg. When he married Susan Wilcox of Buckingham County in 1805, he moved to his wife's native area, there to practice medicine until his death. One of his sons, Edmund Wilcox Hubard, married a step-granddaughter of Thomas Jefferson, Sarah Ann Eppes; they in turn lived at Saratoga, and so did their son, who was a physician like his grandfather: Dr. John Eppes Hubard, who was educated at the Universities of Virginia and Maryland and practiced medicine in Buckingham County until his death in 1892. A mastectomy of the breast, for cancer, performed by Dr. James Eppes Hubard in the 1870's, is still talked about by descendants of the young woman who was the patient. She was given only whiskey to relieve the pain of this radical procedure, it is related—but lived to the age of 86.

Another son of Dr. James Thurston Hubard was Col. Robert Thurston Hubard, who was reared at Saratoga; when he married Susannah Pocahontas Bolling of the nearby estate "Chellowe" (below), he bought Chellowe from his father-in-law and made it his home. On the Chellowe property is the Hubard family cemetery; all three of these generations of Hubards are buried there.



Pen and ink drawings by Margaret A. Pennington, MD, Buckingham County. Historical data courtesy of Mrs. Lorna S. Scott, Dillwyn, Virginia, and Mr. William Stebbins Hubard, Roanoke, Virginia.

VIRGINIA MEDICAL

EDITORIAL

Statistical Morality: The Price of Human Life

THE EXTRAORDINARY success of medicine over the past 20 or 30 years has resulted in the questioning of many firmly held concepts. The view that most physicians have always taken, that human life is priceless and that no cost should be spared to save it, is now being challenged.

An article in the Washington *Post* of May 24, 1977, by staff writer Victor Cohn, related a news conference at the National Press Club called by a group of physicians from the Harvard School of Public Health. According to this report, these physicians suggested that we need to find new methods of medical decision-making since we have developed life-saving techniques well beyond our capacity to pay for them. They reportedly urged that "national priorities" be set to decide who should be helped and by what methods.

A more recent article that appeared in the Washington *Post* of October 31, 1977, addressed the problem of "ordinary" versus "extraordinary" efforts. Reference was made to the fight for the life of a 44-year-old patient hospitalized for some 270 days at a cost of $248,486. The questions asked by the *Post* article were: How much health care is one individual entitled to? What is "ordinary" and what is "extraordinary" when it comes to maintaining life? Is enough ever too much?

With priority being given to some form of national health insurance and the fact that the health bill of the nation is currently 140 billion dollars and will probably be 160 billion next year, we have the makings of a major conflict between individual rights and the costs to be paid by public funds. Indeed, the problem is already upon us with regard to payment by "third-party" insurance funds. It is not dollars alone that is of concern but appropriate utilization of limited resources. The limitation is imposed usually, but not always, by available dollars. Demands for an unlimited right to health care, on the one hand, and efforts to limit health care cost on the other, lead inevitably to the question of rationing in the health care system.

An *AMA News* editorial of December 12, 1977, discussed the right of every American to health care. The head of HEW's new Health Care Financing Administration, Mr. Robert Derzon, was quoted as saying that "underlying that morality is the assumption that the right to health care is an unlimited right. In no other area have we made this decision. . ." He was further quoted as saying "someone is going to have to look at that issue. . . We are going to have to depart from this (absolute) right to a constrained right." The editorial went on to say that health care resources are limited, and patients' wants and needs generally exceed those resources. The concern noted by the editorial, however, was that in addition to treating patients within limits of time and resources, the proposal for "a constrained right" would require physicians to comply with regulatory constraints as well.

These are questions with which society has struggled in areas other than medicine, and which we now face in new measure. Cost benefit analysis is being applied to this area of the utmost importance and sensitivity. The view from Washington will be

quite different than the view from the patient's bedside, but the questions are no less valid.

It is essential that physicians participate in the search for solutions at all levels; with federal agencies, such as HEW and its Health Planning Agencies; with medical associations, or individually with their representatives in Congress; and with interested patients.

This point is forcibly made by Peter F. Drucker in his book *The Age of Discontinuity*. He notes that the central moral problem of the "knowledge society" in which we live will be ability of the learned, the men of knowledge, to accept responsibility. They must learn to participate in decisions which must be made even though the basic decisions will be political decisions. "The only choice open to men of knowledge" he states, "is whether to take part in them responsibly or have them imposed by somebody else."

OSCAR A. THORUP, JR., MD

Geriatrics Limited

THE PRACTICE of geriatric medicine is both rewarding and frustrating to the physician. Most physicians have to deal with older patients; most specialists have a limited responsibility. To those of us who look after the elderly, responsibility is unlimited, for these patients look to us to guide them in all health matters, including what specialist to see and when, and, when the specialist has done all he could, to follow through to the end. This may mean making decisions of whether to allow death with dignity or permit the use of the machines to sustain existence, if not life. At times society appears to treat its animal pets more kindly than it does some of our older citizens in their terminal days on this earth. It is sad to see tubes in every orifice and panting machines at the bedside when less strenuous measures would relieve the suffering and not add to it.

How far should we go in actively treating those past 80 or 90 for such conditions as aneurysm, heart block, metastatic disease, and stroke? Obviously, no sweeping generalization can be made; but it seems to me that we are reaching some sort of ill-defined limit. Treating some of these conditions is not only painful and depressing but enormously expensive, not only to the patient, but to society. A British physician was quoted in a recent newspaper release as saying that "we now have a science which stops people being born and the meddlesome science of geriatrics which stops us dying. The crime of geriatrics," he continues, "is not its existence or its motives but its failure to realize that death cannot be avoided." We have not yet come to the use of a "demise pill" in our society, but with the increasing number of mentally deteriorating patients classified under the label of chronic brain syndrome, one wonders how long society can tolerate or afford this overwhelming dilemma.

Presented in expanded form before the Richmond Academy of Medicine at the Academy building, Richmond, on October 11, 1977.

When the Medicare Act was passed in 1965 it stated, "Nothing in this title shall be construed to authorize any federal officer or employee to exercise any supervision or control over the practice of medicine or the manner in which medical services are provided, or over the selection, tenure, or compensation of any officer or employee of any institution, agency, or persons providing health services, or to exercise any supervision or control over the administration of any institution, agency or person." It seems to me that this declaration has been largely overlooked, if not completely ignored. The practice of medicine has been constantly interfered with and increasingly controlled and regulated.

Let me illustrate. A Medicare patient seen in the hospital must have registered on his chart a note or an order each day the patient is under his care. This is probably a sound practice, but it is interference. A Medicare patient in the nursing home on skilled care must be seen at least every 30 days, not an unsound practice, but still an interference, when less frequent visits might be indicated from a purely medical point of view. A Medicaid patient must be seen every 60 days, whether he needs it or not. One such patient of mine, who is mentally defective, was seen by me about every six months as long as he lived with his family. Now he has to be seen at least six times that frequently, and a recent check with the nursing home shows that he has been seen at least six times in the past two months at government expense. Careful survey of his chart reveals no real need for these visits.

Never in the 40 years that I have practiced in Richmond's hospitals has there occurred such a profound change as that we have witnessed in the past six or seven years. Richmond has always had fine hospitals, since the end of the War Between the States. They were very largely developed by single physicians with the help of others and were established as private enterprises with little thought of making money but only as vehicles for the care of the sick and the injured by dedicated staff.

Now much of this has changed. The small private hospitals have proven inadequate to cope with rising population and with the advent of new and complicated techniques with their attendant expensive instruments, machines, and electronic gadgetry. These have required massive infusions of capital,

which was not readily available in the local market, and improved techniques of business management, including computerization, mass buying, and what is euphemistically called "marketing." Two giant hospital corporations, the largest and the second largest in the country, and two or three smaller corporations descended on the Richmond scene and changed the whole philosophy of hospital operation. They have constructed multi-million dollar hospital buildings with the latest equipment and the most advanced planning, and that is good. However, this has been frequently done without consulting the physicians involved and has thereby alienated the profession.

Advertising long shunned for ethical professional reasons has become the projected norm in spite of the medical profession's remonstrances. Absentee landlords who preside over the corporate structures of thousands of hospital beds scattered over the country seem to care little for the opinion of those of us who work in their institutions. From a philosophic point of view, one wonders if they are not more interested in our patients' money than they are in our patients' care, their beautiful brochures to the contrary. This may be the price that has to be paid for infusion of capital, but one wonders if the tune is too expensive for the piper. I would be amiss if I did not suggest that this attitude adds substantially to the cost of medical care through increased hospitalization insurance premiums as well as directly to the private citizen. The start-up costs and increased charges to third-party carriers and patients is enormous.

Another factor which increases health cost in the Richmond area, and indeed throughout the nation, is the increase in the number of hospital beds. According to national standards, we need four beds for every thousand population. If we assume we have 500,000 people in the Richmond area, this would call for only 2,000 beds. (Obviously, this is a smaller area than the one from which Richmond draws; but it is probably a good horseback figure inasmuch as many more community hospitals have been built throughout the state.) Reasonable estimates have shown that we have around a thousand unnecessary beds now, or planned for the future, in the Richmond area. Of course, this adds immeasurably to the senseless increase in health cost, not only in surplus beds but in surplus expensive equipment, which is plaguing the hospital scene. Every hospital wants its own EMI scanner, its own echo machine, its cardiac catheterization setup, its linear accelerators, cobalt machines, etc. It is understandable that every physician wants the best workshop for his or her patients, but desire must be tempered by what is best for the patient in cost as well as convenience and what is practical for the local medical community.

Restraint in these areas is encumbered by greed on one side and political and constitutional questions on the other. Health system agencies should play a role but should have hard data and demographic facts to guide these decisions—not political clout. The Commissioner of Health has been given the large responsibility of making crucial decisions, and he should be allowed to make them without political pressure.

The nursing home scene has been changed in like manner but to a lesser degree by the influx of nursing home conglomerates. Nursing homes use modern techniques, but their internal operations are less visible to the attending physician. Moonlighting residents care for many Medicaid patients in financial arrangements which are not at all clear to the observer; the moonlighter receives a third of the Medicaid fee, and the other two-thirds is channeled to a nebulous supervisory agency. Perhaps this arrangement needs some clarification. Up-grading the nursing care in some of the homes is badly needed. More short-term Medicare beds are needed.

As outstanding as our medical schools have become, I was surprised to learn that there has been no course in geriatric medicine formally taught. This, in my opinion, is an oversight that needs correction.

Many of our elderly patients come to me with the fears of smoking, saccharin, fats, cholesterol, meat tenderizers, vegetable coloring, fluoride in the drinking water, and ask me, "Doctor, what must I do?" In answering them, I would like to paraphrase the famous quotation on every package of cigarettes: "Living is dangerous to your health, and the longer you live, the more dangerous it becomes, and if you live to be 90, it is usually fatal."

I offer the following suggestions to improve the institutional geriatric scene:

- Build no new hospital beds until need has been demonstrated.
- Evaluate the need for more nursing home beds. The wait for a patient transferring from the hospital to a nursing home providing skilled care is too long.
- Allow the physician a less rigid schedule in visiting nursing home patients.
- Discharge patients as soon as possible from the hospital or transfer them to skilled care facilities.
- Develop geriatric training programs for physicians and nursing home personnel.
- Inform physicians more fully of the facilities each community offers for the care of the aged, how they can better serve these facilities, and what the criteria are for their use.
- Urge everyone to take care of his health when young so there may be fewer health problems when old.

JOHN P. LYNCH, MD

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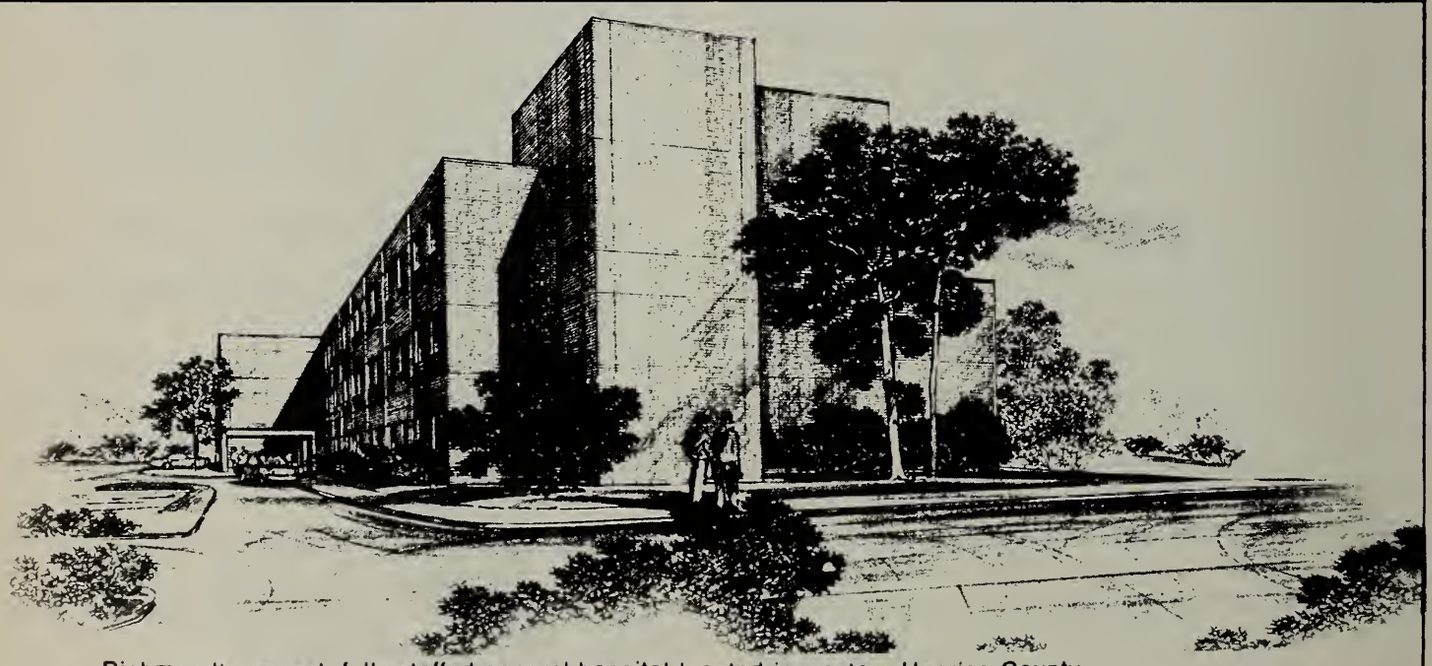
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VIRGINIA MEDICAL OBITUARY

Nelson Mercer, MD

Dr. Nelson Mercer, Washington, DC, died February 12 in Washington at the age of 85. He had been a member of The Medical Society of Virginia 64 years.

A native Virginian, Dr. Mercer was a descendant of distinguished figures in this country's early history. He was a great-great-grandson both of Gen. Thomas Nelson of Yorktown, Virginia, who was a signer of the Declaration of Independence and, in 1781, Governor of Virginia, and of Gen. Hugh Mercer of Fredericksburg, Virginia, who was killed in 1777 at the Battle of Princeton.

Dr. Mercer was born in Richmond and earned his medical degree at the Medical College of Virginia, graduating in 1914. After internships in New York City, he served in 1916 as a captain in the medical corps with the First Virginia Cavalry on the Mexican border and in 1917 was sent to France with the 29th US Division, later serving with the army of occupation in Germany.

A specialist in respiratory diseases, Dr. Mercer conducted a private practice in Richmond until 1938, when he became chief of staff of a tuberculosis sanitarium in Philadelphia. He later joined the medical division of the Civil Service Commission in Washington and lived in Washington until his death.

He belonged also to the American Medical Association and the Retired Officers Association.

William O. Poindexter, MD

Dr. William O. Poindexter, Newport News, a member of The Medical Society of Virginia since 1917, died February 9 at Riverside Hospital, Newport News. He would have been 84 years old on February 26.

Dr. Poindexter was born in 1893 in Bedford County. He was graduated from Lynchburg College and the Medical College of Virginia. After service in World War I, he established his practice in Newport News as a surgeon and general practitioner. He served on the boards of Buxton and Riverside Hospitals and had been president of the Newport News Medical Association.

Benjamin E. Hunt, MD

Dr. Benjamin E. Hunt, obstetrician and gynecologist in Hampton since 1932, died February 7 at his home in Hampton. He was 77 years old.

A native of Poquoson, Dr Hunt was graduated from Randolph-Macon College and received his doctorate in medicine from the Medical College of Virginia, where he was president of the student body during his senior year. He subsequently did graduate work at the University of Pennsylvania's School of Medicine and trained at the Jersey City Medical Center.

Dr. Hunt had been president of the Hampton Medical Society and of the medical staff of Dixie Hospital, Hampton. He had been a member of the Medical Society of Virginia almost 50 years and belonged also to the Southern and American Medical Associations.

Memoir of Robert H. Cox, Jr. 1912-1978

By Francis R. Whitehouse, MD

Robert H. Cox, Jr., was born in Lynchburg, Virginia, on December 25, 1912 and died on February 13, 1978. He received his premedical training at Lynchburg College from 1930 to 1933. His medical training was accomplished at the University of Virginia where he received his MD degree in 1937. His further medical training was two years at Duval County Hospital in Jacksonville, Florida. Specialization in pediatrics was accomplished by two years' training at Grady Hospital in Atlanta, Georgia. He served in the United States Army from 1940 to 1941 followed by the position of director of Children's Tuberculosis Hospital (from 1941-1943) at Alto, Georgia.

Dr. Cox practiced pediatrics in Lynchburg from 1943 until the date of his death. He always was a "compleat pediatrician", ministering to the physical and the mental needs of his patients and their families. In the course of his "day off" he had a most accommodating telephone hour during which his patients or families were welcome to call and chat about anything they felt disposed to. In the course of his professional life he occupied the post of president of the Virginia Pediatric Society and president of the Lynchburg Academy of Medicine. He held membership in The Medical Society of Virginia and the American Medical Association.

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hounds, and hunting was an integral part of his recreational and social life. He was a member of the Bedford County Hunt and served as Master of the Hunt for several terms. He took delight in his horses and rode regularly in the formal fox hunting events and horse shows. He also rode in the 100-mile trail rides, which were competitive and usually held at Hot Springs. The related social life always found him an animated and enjoyable participant. He took great pleasure in quail and dove hunting and in the training and hunting of his bird dogs. There was memorable a dove hunt in Honduras with the author and Tom Whitehouse whom Robert had "raised." Robert also attended all five of the author's children, and the youngest was named Robert in honor of Dr. Cox. He was a member of St. Stephen's Episcopal Church in Forest, Virginia, where he was a vestryman and regular attendant, riding his favorite horse cross-country from his country home to the church for Sunday services to sit in his pew, boots and all.

His first wife was Edna David Wise Cox, now deceased. In November 1968 he married Claire Mansfield Noyes Cox, who had an interest in riding that at least equalled his. He is survived by two sisters, Texas Cox Manly of Bethesda, Maryland, and Elsie Claire Cox Oas of Rockbridge Baths, Virginia, and a brother, Edward Beall Cox of Gainesville, Georgia.

Prepared and published at the request of the Lynchburg Academy of Medicine. See also the Letter page 337.

Beware!

High jury awards are hitting Virginia doctors hard. In the last two years there were eleven professional liability verdicts or settlements in Virginia in excess of $100,000. Yet 50% of MSV members have only the basic coverage of $100,000-$300,000.

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If you have not already done so, consider protecting yourself with this excess limits coverage. Your local agent has the specifics.

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WHO'S WHO IN VIRGINIA MEDICINE

New Governor-Elect for Virginia of the American College of Physicians is Dr. **James M. Moss,** *Alexandria,* the first practicing physician from northern Virginia to hold this office. He is to become the group's Governor in April, 1979, to serve for a 4-year term.

Professor of medicine and director of the diabetic clinic at Georgetown University, Dr. Moss previously has been president of The Medical Society of Virginia, the Virginia Society of Internal Medicine; the Alexandria Medical Society; the University of Virginia Medical Alumni Association, the Heart Association of Northern Virginia, and the American Diabetes Association, both Virginia and Washington, DC, Affiliates. He holds key section and committee posts in the Southern and American Medical Associations and key advisory appointments to the Food and Drug Administration. He is an accomplished medical lecturer and writer and has received many honorary awards.

Faculty members from all three of Virginia's medical schools are to converge on Williamsburg May 19 and 20 for a 2-day symposium on clinical rheumatology for the practicing physician and allied health professionals. Dr. **John S. Davis IV,** *Charlottesville,* is president of the Virginia Chapter of the Arthritis Foundation, which is cosponsoring the meeting, and Dr. **John B. Winfield,** *Charlottesville,* is program chairman. Moderators will be Dr. **Charles L. Cooke** and Dr. **Shaun Ruddy,** both of *Richmond,* and Dr. **Elam Toone,** *Richmond,* will chair the evening sessions.

Dr. **Colin W. Hamilton,** *Virginia Beach,* was inducted as a fellow into the American Academy of Orthopaedic Surgeons at its recent meeting in Dallas.

The American College of Physicians has elected these new fellows: Dr. **David R. Foreman,** *Chesapeake;* Dr. **Stephen H. Rosenoff,** *Salem;* Dr. **Harold W. Felton,** *Deltaville;* Dr. **John W. Vaughan** and Dr. **Vernon Lynch,** *Rocky Mount.*

Dr. **Michael J. Moore,** *Salem,* was elected "Distinguished Internist of the Year 1977" by the Virginia Society of Internal Medicine and will be the candidate from Virginia for the national award to be made by the parent Society. An article by Dr. Moore, "Oral Therapy for Hypomagnesemia," appeared in this journal's March issue.

Dr. **Alexander McCausland,** *Roanoke,* received the American College of Allergists' "Award of Merit" during the College's recent meeting in Las Vegas. The award is made on the basis of specific requirements set forth by the College's Board of Regents.

Dr. **John B. McCraw,** *Norfolk,* was a speaker at a 3-day scientific meeting sponsored by the Michigan State Medical Society in Dearborn late last year, and photographers for the Society's journal, *Michigan Medicine,* found him in discussion there and took the picture below. Dr. McCraw, who is associate professor of plastic surgery at Eastern Virginia Medical School, conducted an 8-hour course on flap surgery; he is shown below, at center, describing a technique. Dr. Neal R. Wilson, Detroit, who directed the course, observes at left, and Dr. Satish C. Vyas, Wayne State University plastic surgery resident, is the model.



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Letter from the President:

The following editorial by Colman McCarthy appeared recently in the Washington Post. *As you well know, the rising costs of health care have been and will continue to be subject to intensive and widespread debate. The complex cost vs. quality problem is often oversimplified or misunderstood.*

I would be very interested in hearing your comments on Mr. McCarthy's thoughtful column.

William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

AFTER YEARS of hearing about high medical bills, she was now stuck with one herself. She had gone for an office visit and had taken but 10 minutes of the doctor's time. Days later, she received a bill for $50. The amount seemed staggering—the more so since, on initially seeing the doctor, she had spelled out the facts of her finances: She was a student and had little money and no insurance. What she did have was a sound reason to seek the doctor's help: a severe and persistent headache.

As it happened, the examination revealed nothing. Indeed, the patient's headache went away in a few days. But the $50 bill hit her like an even bigger headache. Upon recovering, she wrote to the doctor to ask "for a break." Would he reconsider his bill in favor of a lower fee?

When the reply came back, she was stunned. The doctor's office manager said that although "the basic charge . . . for a complete neurosurgical consultation and evaluation is $50," the doctor was waiving the

fee: "There will be no charge for the office consultation." The letter ended with cordial words.

When shown copies of that exchange, I was stunned too—by a positive charge of elation that here was one physician whose empathy countered the image much of the public has of doctors: the nation's highest paid professionals who think of the buck first and the patient last. I have had those thoughts myself, but in recent years I have been wondering exactly how sound they are. Doctors defend high fees by telling of all those weary years in med school, of earning low pay as interns, and often of leaving school in hock to the government for tuition loans.

But it isn't what doctors have endured in the past that gives me second and third thoughts, but what they must endure now. Large numbers of them, from pediatricians to internists, are all but helpless in avoiding the hordes of patients who actually have nothing wrong with them. In "The Lives Of a Cell," a volume that won the 1975 National Book Award, Dr. Lewis Thomas writes that "the great secret, known to internists and learned early in marriage by internists' wives, but still hidden from the general public, is that most things get better by themselves. Most things, in fact, are better by morning." But because we have let ourselves be conditioned to demand "instant relief"—why wait for morning?—we sprint to the doctor for action this minute.

How can some physicians not be worn down by it all? We force them to go along with pretenses that illnesses really are present in the bodies before them. The doctor is asked to practice not medicine but theatrics, to play the role of listening gravely to the usual recital of symptoms, writing prescriptions for drugs that may or may not work or be safe, and suggesting a return visit next week. That fiction is what large numbers of patients want, not the reality of the doctor's anger for wasting his time with imag-

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ined ills, and much less his advice to "go home—you'll be better by morning."

That some bills are stiff may be because of a feeling of resentment a doctor feels about a reality described in the recent *New Yorker* profile of Dr. Thomas: "It is estimated that 75 percent of the visits to doctors and clinics are by people who do not have anything organically wrong with them." The temptation for a doctor is often too great: if patients bother me with inflated ailments, why shouldn't I bother them with inflated fees?

Authentic illnesses and injuries exist. But for the citizens who have them—the 25 percent—the doctor functions as a doctor, not an actor, listener or pacifier. They are probably the same citizens who know that good health can be more a matter of sound diet and regular exercise than of medical ministering. As for patients who are hit with excessive bills, a harsher judgment rests on them than on the seemingly greedy doctors. Perhaps they would never get a bill of any kind if they went to the doctor as the last resort, not the first.

The editorial by Colman McCarthy here published appeared in the Washington *Post* of April 11, 1978, under the title, "Inflated Ailments, Inflated Fees." It is reprinted here by permission.

Liability Insurance Boon Energized by Doctor Weyl

Dr. W. Leonard Weyl, Arlington, had long been abraided by the "reporting endorsement" or "tail premium" feature of professional liability insurance, and when he was MSV President 1976-77 he set about badgering the Society's carrier into changing it. His efforts finally paid off recently when he received the first annuity/disability/life insurance policy that provides a sensible alternative to the reporting endorsement. The policy was not only the first in Virginia but the first in the nation and a milestone in the professional liability insurance field.

Under the reporting endorsement or tail premium procedure, the insured physician or his estate is hit with a large lump-sum premium when disability, retirement, or death occurs, or when the physician moves his practice to another state. This payment is to protect the doctor or his heirs from malpractice suits that might be filed against his previous practice. It is a big chunk of money, assessed all at once.

The new plan offers the physician a policy with yearly premiums paying for these elements: 1) an annuity portion that sets dollars aside to fund the tail premium; 2) term life insurance with a death benefit that also funds the tail premium and is free from income tax; and 3) disability income insurance, similarly applicable to the tail premium and similarly income-tax free. (This disability portion offers the same features separately available for many years in the carrier's disability waiver premium policy.)

In sum, annual premiums gradually build up the necessarily large terminal protection.

Doctor Weyl worked closely with the MSV carrier, St. Paul Insurance Companies, on this innovative policy, and Virginia physicians owe him a large salute.

When your professional liability insurance comes up for renewal, you will receive an application for this new policy.

Watch for it, and investigate. You'll be glad you did.



W. Leonard Weyl, MD (right), receives the first policy from Insurance Agent William E. Cassidy.

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MEETINGS ABOUT MEDICINE

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Current **Drug Use in Pregnancy,** sponsored by the Johns Hopkins Medical Institutions, Cross Keys Inn, *Baltimore,* June 16-17. Office of Continuing Education, 720 Rutland Avenue, Baltimore MD 21205, or call 301 955-5880.

Clinical **Pharmacology** for Physicians: a Contemporary Review of Rational Drug Use, sponsored by the Johns Hopkins School of Medicine, *Baltimore,* June 19-20. Course Coordinator, Room 17, Turner, 720 Rutland Ave., Baltimore, MD 21205, 301 955-5880.

The Art and Science of **Sports Medicine,** sponsored by the Division of Sports Medicine, University of Virginia, *Charlottesville,* June 21-24. Dr. Frank C. McCue, III, University of Virginia Hospital, Charlottesville VA 22903.

July

Cardiac Symptoms and Arrhythmias—Their Diagnosis and Treatment, sponsored by International Medical Education Corporation, Hospitality House, *Williamsburg,* July 14-16. IMEC, 64 Inverness Drive East, Englewood CO 80110, 800 525-8646 toll free.

International **Automotive-Medical** Meeting, sponsored by American Association for Automotive Medicine and the International Association for Accident and Traffic Medicine, University of Michigan, *Ann Arbor, Michigan,* July 10-15. Lee N. Hames, 535 North Dearborn Street, Chicago IL 60610, 312 751-6585.

Pediatric and Adolescent Endocrinology and Metabolism, sponsored by Dept. of Pediatrics, University of Virginia School of Medicine, *Charlottesville,* July 31-August 4. Ms. Peggy Denby, Box 386, UVA School of Medicine, Charlottesville 22901.

August

Coronary Disease, Exercise Testing, and **Cardiac** Rehabilitation, sponsored by International Medical Education Corporation, Hospitality House, *Williamsburg,* August 4-6. IMEC, 64 Inverness Drive East, Englewood CO 80110, 800 525-8646 toll free.

Aspen **Mushroom** Conference, Wildwood Inn, *Snowmass-at-Aspen, Colorado,* August 13-18. Emanuel Salzman, MD, Beth Israel Hospital, 1601 Lowell Blvd., Denver CO 80204.

September

Diagnostic **Ultrasound** in Obstetrics and Gynecology, Johns Hopkins Medical Institutes Dept. of Radiology/Radiological Science, *Baltimore,* September 7-8. Program Coordinator, Turner Auditorium, Room 22, 720 Rutland Ave., Baltimore MD 21205, 301/955-5880.

National Conference on the Care of the Child with **Cancer,** sponsored by American Cancer Society, Sheraton-Boston Hotel, *Boston,* September 11-13. Sidney L. Arje, MD, American Cancer Society, 777 Third Ave., New York, NY 10017.

Cardiology for the Clinician, sponsored by Tidewater/Virginia Peninsula Chapters, American Heart Association, and Eastern Virginia Medical School, Hospitality House, *Williamsburg,* September 21-23. Tidewater Chapter American Heart Association, 891 Norfolk Sq., Norfolk 23502, 804/857-5961.

American Society of **Internal Medicine,** Interim Meeting, *Orlando, Florida,* September 29-30. ASIM, 535 Central Tower Bldg., 703 Market St., San Francisco CA 94103, 415/777-1000.

Primary Care of Hand Injuries, sponsored by American Society for **Surgery of the Hand,** *Sea Island Georgia,* September 28-October 1. American Society for Surgery of the Hand, 2600 S. Parker Rd., Aurora CO 80014, 303/755-4588.

American Medical Association
Annual Convention, June 17-22, *St. Louis*
Interim Convention, Dec. 2-6, *Chicago*
Scientific Meeting, Dec. 7-10, *Las Vegas*

VIRGINIA
MEDICAL
JUNE 1978

Your Office: Does It Have a "Bedside Manner"?

Roger E. Miles, MBA, *Norfolk, Virginia*

The medical administrator has a unique view of a doctor's office and an interest in the success of that office matched only by the doctor himself. This is the first in a series of articles to be written for VIRGINIA MEDICAL by medical administrators. The author of this article writes out of his experience not only as an administrator but as a patient. His advice is valid whether or not your mode of practice warrants professional management.

ON A RECENT morning I had an 8:30 appointment with a doctor whom I have been seeing twice a year for the past five years. His office is well decorated, attractive, pleasant, nice use of color, comfortable. The actual visit with the doctor was pleasing; I was glad to see him and he appeared glad to see me. He told me carefully of his observations and said he would call and tell me about the lab work when the reports were in. The doctor accompanied me to the front desk, instructed the clerk to give me a return appointment for six months hence, and went back to his examining room.

"That's $46 for today," said the clerk. Neither a friendly nor unfriendly tone, just a statement. I was reaching for my checkbook.

"Is June 20 at 8:30 am okay? It's $46 for today," the clerk repeated.

"Yes, that's fine," I said, hesitating. I wanted to put the doctor's full name on the check and couldn't remember his middle initial.

Address the author at Psychiatric Associates of Tidewater, Inc., 844 Kempsville Road, Norfolk VA 23502.

"Oh, we have a stamp for your check," said the clerk, responding to my puzzled look. I asked for the return appointment notice so that I could read the name for myself; the clerk replied that I couldn't have it until the receipt had been written. Just then the office manager appeared, gave me at once the information I needed, the check was written, return appointment notice received, and I was on my way.

I was not happy, however; forgotten was the pleasant visit with the doctor.

MEDICAL group management is my career. I want patients to pay before they leave the office; therefore, I have always paid before leaving this doctor's office. It is understandable, perhaps, that the clerk cannot know the individual paying habits of a patient who comes in only twice a year. That is not the point. The point is, the clerk failed to carry out her role in the desired manner. Whether from lack of training or her own inability is not known to me, only the end result.

Specifically, the way she made me aware that payment was expected was inappropriate. She should

have scheduled the return appointment and then said something like, "The charge for today is $46. Will you pay with cash or by check?" or, "So that you may make payment, the charge for today is $46."

Secondly, she failed to understand my check-writing dilemma and offered an inadequate solution. For her to stamp my check after she got it to her work station would not provide me with the information needed to make the entry in my checkbook. I strongly recommend that you have the group's name and the names of the individual doctors in an easily seen location for the convenience of your check-writing patients and for those who suddenly find themselves unable to remember the doctor's or group's name.

Next, her manner of commenting on my request for the return appointment notice was clumsy at best and an affront at worst. She used a pegboard system which utilized a "write-it-once" method, incorporating charge, payment and return appointment information on the same form. I could have understood the clerk's problem if I had thought about it; at the time I was not a manager, however, but a patient, and from lack of training, experience or ability, the clerk did not perceive my needs and reacted to an arbitrary requirement of the system rather than to discovering the reason for my request.

Strive to hire quiet, competent, sensitive people for your office. Make sure that they are adequately trained to carry out not only the mechanical requirements of their jobs but also the human interaction aspects.

Be sensitive to the environment in which you practice; the appearance of the physical facilities, the appearance, quality and competence of the personnel, individually and collectively, influence a patient's attitude toward you and the medical care you give the patient. Negative feelings generated by non-medical factors may greatly influence a patient's decision in borderline malpractice situations.[1] The office staff must possess a keen awareness of, and sensitivity to, the needs, problems and moods of the patients. The role is a large one and contains many components beyond the scope of this article. In summary, both you and your staff need to possess an excellent "bedside manner."

Be aware always that communication is not limited to the patient transmitting data to you and the office staff transmitting data to the patient. You must transmit data to the patient and you must do it so that it is understood. Be as basic, simplistic and repetitive as you need to be in each instance. If instructions are important to the patient's health, then it is important that the patient understands them. Have him or her repeat the information to you. Just as important in these litigious times is that you keep well documented records of pertinent findings, treatment and disposition, including instructions given.

Remember that time is a communicator—especially time spent waiting to see the doctor. Most patients do not want to be in a doctor's waiting room. Therefore, no amount of comfortable seating and decorating is going to compensate for inordinant delay, and current magazines will not do it either. If you are unavoidably delayed, make sure your staff has been trained to keep the patients informed—not just a brief comment when the patient checks in, but regular progress reports. Make beverages available; where appropriate, offer to reschedule the appointment. A patient who has developed negative feelings due to a long wait is not going to be a good informant or a good listener. He or she may, however, be a spreader of bad public relations and critical of the medical care even though the only real "bad" was the wait.

Finally, teach your staff to be especially cautious about unintentional communication. It may be a breach of confidentiality, real or perceived, or an overheard comment misapplied. For example, consider the impact on a patient who is worried about cancer overhearing the comment, "Isn't that a shame about her; you would never suspect. . .". Be sure your staff is supersensitive to careless communications and studiously avoids them.

Reference

1. Malpractice Digest, July/August 1977. St. Paul, Minnesota, St. Paul Fire and Marine Insurance Company.

Hospital-Acquired Infections: A Medical and Economic Problem

Richard P. Wenzel, MD, *Charlottesville, Virginia*

Virginia is the only state with a program of surveillance and reporting of all hospital-acquired infections. The author discusses the contributions of this unique system and reviews data on leading nosocomial infections.

INFECTIONS which were neither present nor incubating at the time of admission are acquired by 5-10% of patients who enter hospitals. These nosocomial, or hospital-acquired, infections are significant medical and economic problems. The Center for Disease Control estimates that patients with hospital-acquired infections spend an average of ten extra days in the hospital per nosocomial infection. Especially controlled studies at the University of Virginia Medical Center show that patients with nosocomial bloodstream infections have a significantly greater mortality than do uninfected patients matching in age, diagnosis, and procedure: 38% versus 10%. The excess mortality of 28% is considered to be a direct result of the nosocomial infection. Other controlled studies show that patients with postoperative wound infections remain hospitalized twice as long after surgery as do their controls, patients who do not have infections at the incision site.

At the University of Virginia Medical Center, continual surveillance for hospital-acquired infections has been routine since 1972. The method of surveillance, published nationally and widely used throughout the state, has proved to be very efficient and approximately 80% sensitive in detecting nosocomial infections. Data collected in surveillance programs at the University of Virginia and other hospitals are used in several ways to document nosocomial infections, to identify specific infection agents and sources, and to refine hospital infection control measures.

At present, for every 100 admissions to the University of Virginia Hospital there are 7.5 hospital-acquired infections. Approximately one-third of all these infections are urinary tract infections (80% of patients at this hospital with nosocomial urinary tract infections had an indwelling bladder catheter prior to infection). One-fifth of all nosocomial infections are postoperative wound infections. Approximately 15% of hospital-acquired infections are pneumonias and another 15% are bloodstream infections.

The etiologic agents of most nosocomial infections are bacteria, 70% of which are gram-negative aerobic rods such as *Escherichia coli, Pseudomonas aeruginosa,* and *Klebsiella pneumoniae.* Some viral agents are also implicated in hospital-acquired infections.

Since 1974, many hospitals have observed the emergence of gentamicin-resistant gram-negative rods as the etiologic agents of nosocomial infections. Refined surveillance at the University of Virginia indicates that most of these resistant organisms are in patients housed in intensive care areas of the hospital. We have shown that in some intensive care units, such as the cardiac care unit, there is almost no risk

From the Division of Epidemiology and Virology, Department of Medicine, University of Virginia School of Medicine, Charlottesville VA 22901.

Presented at the annual meeting of The Medical Society of Virginia, Williamsburg, October 15, 1977.

that a bloodstream infection will be caused by a resistant organism. In other intensive care areas the risk is one in three that nosocomial bloodstream infections will be caused by gentamicin-resistant gram-negative rods. Investigators at this hospital have also indicated that the reservoir for most gentamicin-resistant gram-negative rods is patients, not the inanimate environment, and, furthermore, that the primary mode of transmission—from patient to patient or from health professional to patient—is by close contact rather than by the airborne route. The infection control program at the University of Virginia has been a valuable source of information for clinicians administering antibiotics to acutely ill patients (e.g., alternative antibiotics are given to patients with gentamicin-resistant gram-negative rod infections) and for hospital officials setting infection control policies (e.g., we advise improving aseptic technique in providing care to patients and we recommend strict adherence to handwashing before proceeding from one patient to another).

Viruses, especially respiratory viruses, can cause nosocomial infections. Viral infections pose significant problems in pediatric care units where patients with viral respiratory infections develop fever and require antibiotic therapy. In Africa, some unusual viral infections have recently resulted in severe nosocomial infections. Marburg virus disease is an hemorrhagic fever which is spread to man by monkeys and has significant morbidity and mortality in African hospitals. The Ebola virus, another African pathogen, has closed down hospitals because of the extreme mortality in physicians and nurses caring for patients (well-documented studies showed the overall mortality to be 88%). It is unlikely that we in the United States will see these viruses—or even the smallpox virus which has presented a problem for European hospitals; however, we should be mindful of the travel history of patients who present with infections which might necessitate initiation of institutional infection control measures.

It is possible that we may see "slow virus" nosocomial infections as a result of transplantation and instrumentation. Two cases of Jakob-Creutzfeldt disease have occurred following corneal transplantation. In each case, the donor was afflicted with the disease's progressive neurologic deterioration; months after the time of corneal transplantation, each recipient developed Jakob-Creutzfeldt disease. In addition, two epilepsy patients, each of whom had intracerebral probes placed to locate the focus of epilepsy, developed Jakob-Creutzfeldt disease 18 months after the procedure; the probe used had originally been placed in a patient with Jakob-Creutzfeldt disease, and, despite "disinfection" with formalin, the causative agent was not killed. It has since been acknowledged that the agent, perhaps a virus or viral particle, is not inhibited by ultraviolet light, formalin, or alcohol. Thus, it becomes extremely important from the standpoint of nosocomial infection control that hospitals and their infection control committees identify donors in cases of organ replacement and identify as well previous users of instruments or equipment.

Within the past year, Legionnaires' disease has received a great deal of attention both as a community-acquired and hospital-acquired infection. The incubation period can be lengthy—up to two weeks—and, therefore, it is often difficult to determine whether a patient has a community-acquired illness with a long incubation period or a hospital-acquired illness. Some patients have been thought to have acquired Legionnaires' disease in the hospital, since they have been hospitalized longer than the presumed incubation period. Neither the reservoir nor the mode of transmission for this disease is fully known as yet. The University of Virginia Hospital's Infection Control Committee has recommended strict isolation in especially ventilated rooms (with negative air pressure) for any patient with Legionnaires' disease.

Virginia is one of only three states in which law requires that hospitals perform surveillance for nosocomial infections. It is the only state in the country in which there exists a statewide program for surveillance and reporting of all hospital-acquired infections. All infection control practitioners who report hospital-acquired infections have been trained at the University of Virginia Medical Center and they use uniform definitions in their surveillance. At present, over 50 Virginia hospitals participate in the reporting system, and they have been extremely reliable, with 85% compliance and 70% accuracy in monthly reporting.

The Virginia system of surveillance and reporting is the means by which we are now conducting a multihospital study of the relationship of aminoglycoside antibiotic usage to the rate of appearance of aminoglycoside-resistant organisms. Approximately 30 hospitals in Virginia are taking part in this two-year project, the purpose of which is to determine whether or not there is a simple relationship between the grams of aminoglycosides used and the rate of emergence of resistant organisms. On the basis of the study's results, we might be able to determine whether the newest aminoglycoside (one with the broadest spectrum of activity against gram-negative rods) should be used widely in hospitals or held in reserve as a potent weapon against severe outbreaks of nosocomial infections due to resistant gram-negative organisms. ■

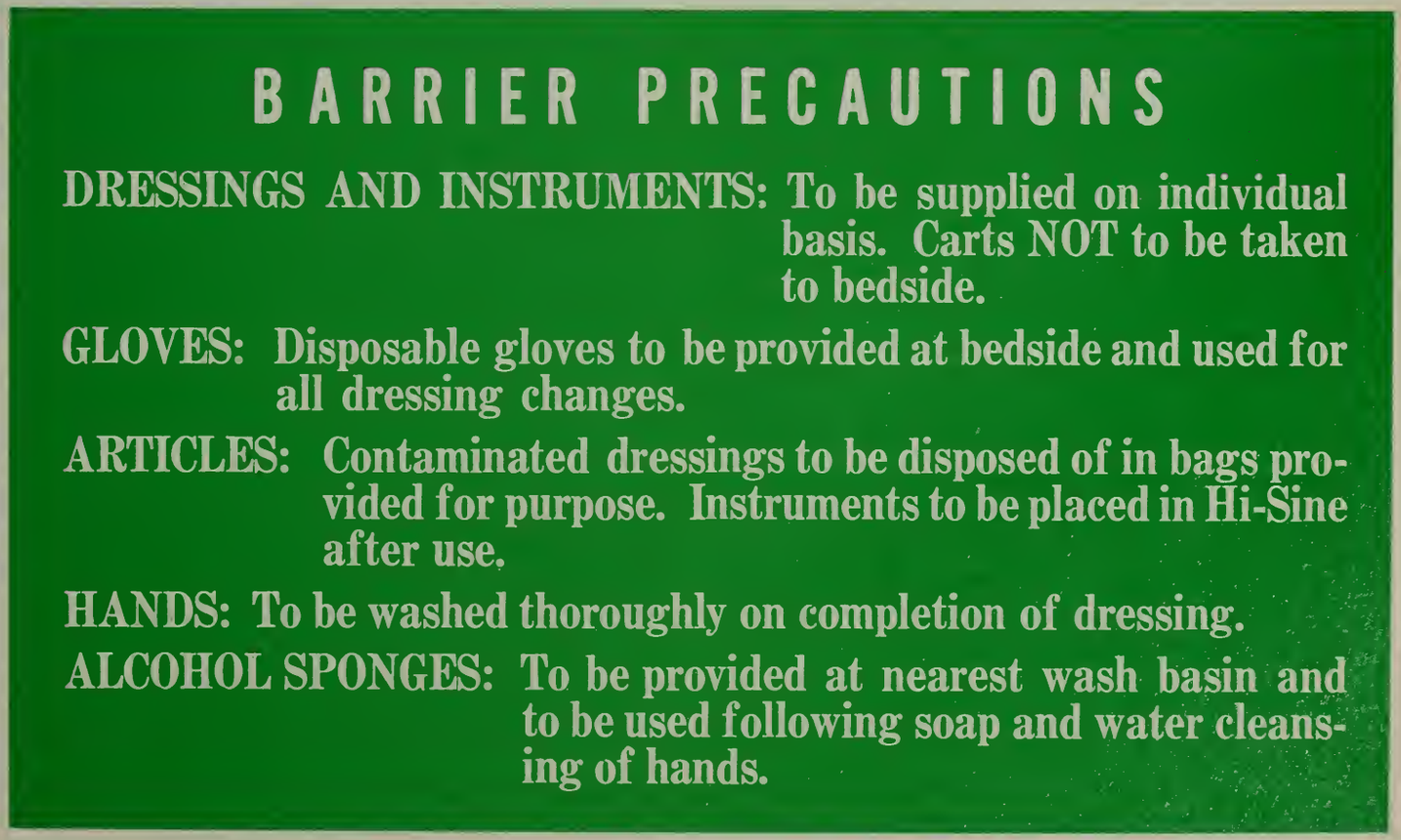
The Case for Simplified Wound Infection Control: A Community Hospital Experience

Monford D. Custer, Jr., MD, and Virginia Allen, RN,
Winchester, Virginia

A "barrier technique" proves successful in simplifying procedure and increasing the cooperation of nurses and doctors in prevention and control of wound infections. The authors' study reveals no compromise in the level of patient care and actually suggests reduced incidence of infections.

THE PROBLEM of hospital-acquired infections is receiving increased attention. The incidence of wound infections varies from 5%–12% when sought for carefully, and development of such infection in even the cleanest wounds is acknowledged as occurring in between 1% and 2% of cases.

Overall cost is tremendous. Peter Cruse,[1] in a recent review, estimates the dollar cost alone at $7,000



Reproduced on the previous page is the barrier precautions sign posted by Winchester Memorial Hospital on the doors to rooms of all patients with wound infections. The Hospital's surveillance officer has responsibility for posting the signs, which are printed black on "neon" green for high visibility and have adhesive backing for quick and easy installation.

per patient, when one includes an average delay in hospital of 9.1 days, loss of work time, and insurance payments. But other factors devastate both the patient and those responsible for his care. In the interest of containing the spread of organisms, a series of stringent isolation procedures has been traditional,[2] confining the patient to solitary status, alarming his family, and imposing costly, time-consuming procedures upon nursing and other hospital staff. A "leper complex" tends to demoralize the patient, fear and frustration pervade floor personnel, and the surgeon is tempted, despite himself, to deny or attempt concealment of facts.

This paper deals with an eight-year experience with this problem in a community hospital of 485 beds where a total of 7949 surgical procedures was performed in 1975. Emphasis is directed particularly toward the results which followed a gradual, planned relaxation to less stringent isolation methods through a regime called "barrier technique."

Background of Study

The situation existing on the surgical service of the Winchester Memorial Hospital at the start of the year 1969 was one of almost constant strife. The nursing staff, indoctrinated in the concept of spread of infection from patient-to-patient on the ward, felt urgent need for strict and immediate isolation procedures. The medical staff, suffering the inconvenience and frustration of rigid isolation imposed, on occasion, without knowledge of the attending physician, exhibited increasing reluctance to acknowledge the presence of infected wounds.

In January, 1969, an Infections Committee, the first to be established in the hospital, was charged with the responsibility of studying this serious problem. Three months of preliminary study led to a decision to attempt a more reasonable approach to handling patients with infected wounds. In March, 1969, the following policy statement was issued, and a trial change from strict isolation to what we term barrier precautions was announced:

The aim of this committee is to support those preventive measures which can be reasonably expected to limit the spread of infection from one patient to another while minimizing, insofar as possible, the burdens created by isolation techniques upon the patient, upon his family, and upon the nursing staff responsible for his care.

Toward this end, it is recognized that: 1) A significant percentage of world infections are "endogenous," relating to exposure of the interior of the patient's GI tract to the operative environment, or to other sources of inoculation (skin, nasopharynx) by the patient's own virulent organisms. 2) Most hospital-acquired wound infections result from inoculation prior to closure and not from patient-to-patient spread.

The Committee then recommended the following measures for routine procedure, and they were subsequently instituted.

Obtaining of cultures is to be encouraged for all wounds exhibiting suspicious drainage in order to determine the causative organism, its antibiotic sensitivities, and, when possible, to provide clues to the origin of the infection. Surgeons are asked to endorse a policy whereby surgical supervisors are instructed to obtain cultures on suspicious wounds and to note this fact on the patient's chart.

The barrier technique as outlined below will be substituted for isolation procedures.

A. The patient (and his roommate [s]) will not be relocated.

B. The dressing chart will be isolated from the patient's room.

C. Necessary instruments and dressing are to be kept at the patient's bedside for his own use.

D. Disposable gloves will be worn by doctors and nurses in the performance of dressings.

E. Contaminated dressings are to be disposed of by transfer in an appropriate bag to a designated container.

F. Thorough handwashing, not simply the "social rinse," is mandatory and considered the essence of the program for all who participate in the dressing procedure.

G. Alcohol sponges will be provided at nearby sinks for hand cleansing by doctors and nurses following soap and water lavage.

The trial measures which were recommended and subsequently instituted suggested to some the likelihood of actual increase in incidence or severity of infections as a trade-off for convenience. In the interest of minimizing this hazard, the Infections Committee sought help from the Department of Preventive Medicine of the University of Virginia, where the proposed program was reviewed and approved on a trial basis. We would like to express appreciation for advice and encouragement from the professional

staff of that department and, in particular, from its then chairman, Dr. Calvin M. Kunin.

The importance of a full-time surveillance officer, first outlined by Gardner and his associates in Great Britain in 1962[3], was appreciated early in our study. The service of a nurse-epidemiologist was requested of the hospital administration, and the request granted.

By taking advantage of training opportunities offered by the Virginia State Department of Health in cooperation with the University of Virginia Medical Center, supplemented by the Communicable Disease Center's Infection Control Course (1970) and participation in the Statewide Nosocomial Infection Surveillance and Control Project (University of Virginia, 1974), we acquired the services of a competent surveillance officer who continues in this capacity to the present time. By general agreement, she has accounted largely for the success of our program.

Results

The program was initiated in April, 1969, and many of the skeptics expressed interest, if not actual enthusiasm, within the ensuing 12 months. During this interval, it became increasingly apparent that the handling and control of wound infections by barrier technique was working. No evidence of spread of infection resulting from the altered protocol development, and we became convinced that standards of patient care had in no way been compromised. By early 1970, a remarkable change was evident in the attitudes of both nurses and doctors toward the whole problem, and the measure of cooperation in recognizing, evaluating, treating, and reporting wound infections which developed became a source of satisfaction throughout the hospital.

As acceptance and confidence were gained in the simplified technique, the trial became permanent procedure. Except for total joint replacements, excluded from exposure to barrier patients by preference of the orthopaedic staff, and for reasonable diligence in assignment of those of highest risk, principally patients in intensive care units, all others throughout the hospital are now treated, and have been for the past 84 months, without dislocation of patient or his roommate(s) from his own setting, without restriction of normal visiting, and without the use of gowns, masks or other special apparel other than disposable gloves. We have been pleased with our results.

The general impression of the surgical staff, floor nurses and their supervisors, the Infections Committee, and the nurse-epidemiologist is that the program has worked and worked well. A correlation of data now supports this thesis.

In 1974 our hospital joined in a regional reporting program[4] involving an average of 33 hospitals throughout Virginia divided into government, university and community centers. Comparative figures concerning attack rates correlated with the incidence of nosocomial infections are now available on a monthly basis for a total of 30 consecutive reporting periods. The results are incorporated in Tables 1 and 2, which appear on the next page.

Table 1 compares the incidence of overall nosocomial infections between the Winchester Memorial Hospital and composites, in the first instance, of those hospitals reporting in the same size category (more than 300 beds), and, in the second instance, of all 33 reporting hospitals. Table 2 provides the same comparisons as they relate strictly to postoperative wound infections.

Conclusion

This greatly simplified program has worked well for us, but it must be undertaken with diligence and careful direction. The following are stressed as essential:

1) Prompt in-service training for new employees, and continuing refresher courses for all others in patient contact. This includes medical staff, nurses, aides, and orderlies.

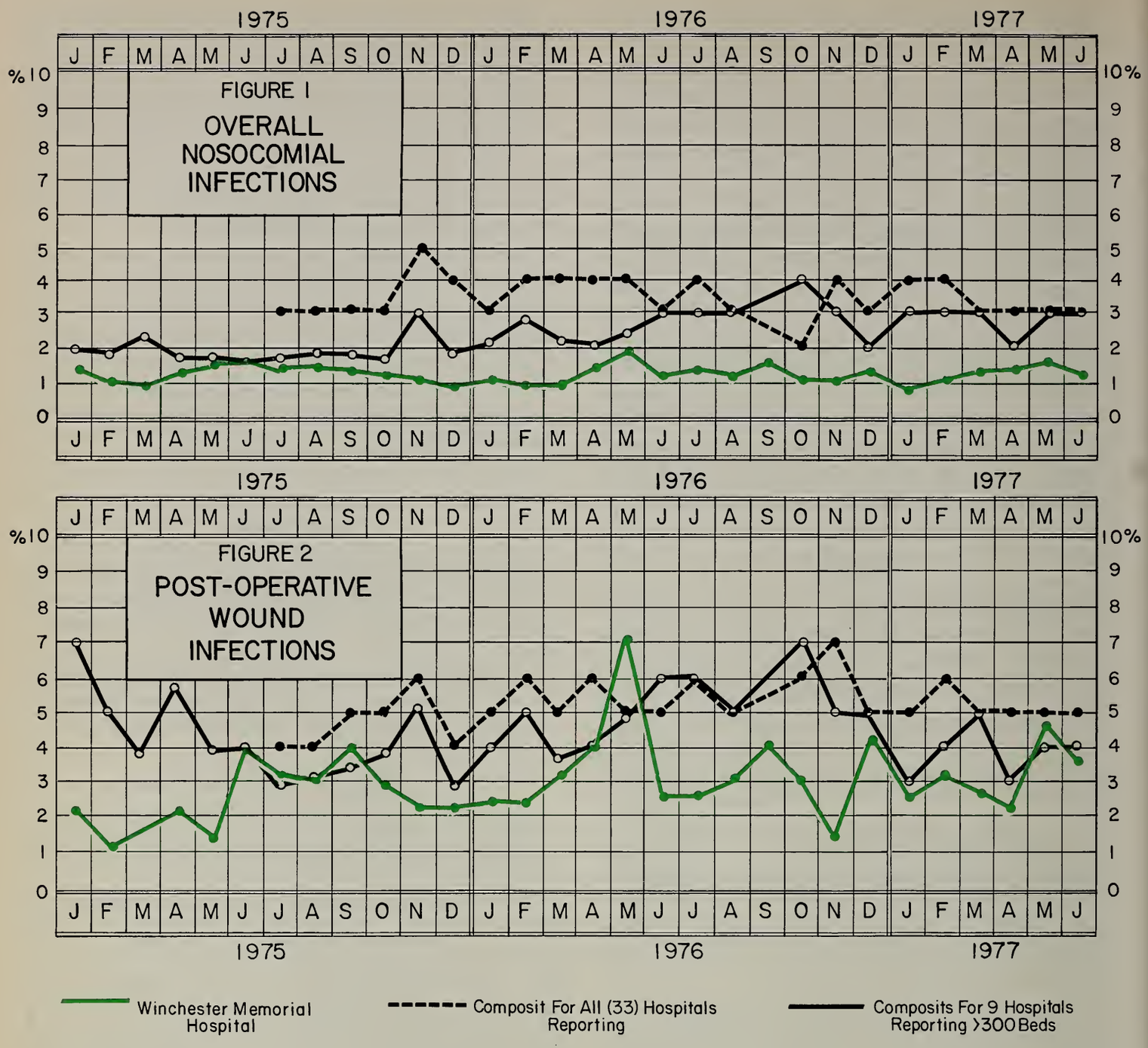
2) The enforcement of scrupulous handwashing.

3) Constant surveillance by a trained individual.

Despite the fact that a single preventable wound infection must be of major concern within the hospi-

A National Hospital Infection Study

The publication of this article coincides, significantly, with the appearance of an important national study on hospital infection and control in a recent issue of the Center for Disease Control's *Morbidity and Mortality Weekly Report.* The study describes the growing concern over hospital-acquired infections and gives preliminary evaluation of control practices; it notes that, although control programs have increased markedly, their efficacy and cost-effectiveness cannot be assessed due to lack of scientifically valid data. This article from the Winchester Memorial Hospital, documenting a departure from traditional isolation techniques, gives data indicating overall improved results, reductions in costs and effort, and great improvement in medical/nursing staff cooperation.



tal, it is our feeling that a great deal of effort expended in the past toward infection control has been wasted. A simplified barrier technique, in effect now for more than seven years, has proven helpful in reducing this waste and has been of substantial benefit in improving cooperation between nurses and doctors in prevention and control of wound infections. Of greatest importance is that control studies, over a period of 30 consecutive reporting periods, indicate no compromise in the level of patient care.

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Submitted 10-19-77.

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Immunizations: Critical Problem in Preventive Medicine

Joseph R. Zanga, MD, *Charlottesville, Virginia*

"In Virginia, where we had last year 2,800 cases of measles, or 5% of the United States total, only 59.8% of preschoolers have complete immunization records."

THE MEDICAL community has recently become aware of a crisis in preventive care that is growing to epidemic proportions. It is not a crisis of disease but rather an epidemic of apathy. There is a certain security in the knowledge that since the mid-1940's the American people have had at their disposal the means of preventing many of the communicable and infectious diseases of the past. That security was strengthened by the quick succession of immunogens which followed, so that by the 1970's it was unnecessary for anyone, child or adult, to be afflicted by diptheria, pertussis, tetanus, polio, measles, mumps, or German measles.

The security is deceptive! According to the Center for Disease Control, nationally, for the year just past, there was reported 84 cases of diptheria, 1,900 cases of pertussis, 70 cases of tetanus, 20 of polio, 20,123 mumps cases, 20,045 rubella cases, and 54,847 cases of measles—almost half again as many as a year ago.[1] These figures are especially striking in light of the proven effectiveness and relative safety of the preventive vaccines.

The "why" of all this is not as simple to commit to paper as the facts themselves. Certainly the medical providers must take a share of the responsibility. The volumes of patients seen in a general practice make it difficult to verify patients' statements as to the completeness of their immunization status. Then too, there is the patient in whom the physician defers immunization because of illness, sometimes appropriately, sometimes not. Re-scheduling in these cases is often difficult, especially for those families with no regular identified provider of medical care.

Studies have well described the characteristics of patients who fall into that latter category and are generally among the group with the lowest immunization status. These families are seen as having a low perception of disease seriousness, a low perception of risk of disease, inadequate knowledge of vaccine effectiveness, young parents, low parental education attainment, large family size, and less media exposure.[2] Without careful followup, which is time consuming and expensive, this poorly immunized group will remain so.

It is estimated that nationwide only 65% of preschoolers are fully immunized; and in Virginia, where we had last year 2,800 cases of measles, or 5% of the US total, only 59.8% have complete immunization records.[4]

Tables 1 and 2 provide the latest schedule for the immunization of all age groups.

Inevitably, questions arise. Why bother with mumps vaccine, for example, since it is a relatively

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Table 1.[5] PHS/AAP Recommended Active Immunization Schedules for Normal Infants and Children.*

AGE	VACCINE
2 mos.	DPT[1] TOPV[2]
4 mos.	DPT TOPV
6 mos.	DPT
12 mos.	Tuberculin Test[3]
15 mos. or after	MMR (Measles, Mumps, Rubella)
18 mos.	DPT[4] TOPV[4]
4 yrs. (preschool)	DPT TOPV
14–16 yrs.	Td[5] (and thereafter every 10 years)

* Note: Package inserts should be reviewed to insure correct handling of vaccines.

1. Diptheria and tetanus toxoid with pertussis vaccine may be started as early as 6 weeks, and intervals between immunization may be as short as 4 weeks.
2. Trivalent oral polio virus vaccine may be started as early as 6 weeks, and intervals between immunization may be as short as 4 weeks.
3. The initial test should be given at the time of, or preceeding, the measles immunization.
4. DPT and TOPV may be given at 18 months, when patient return is likely. If patient return is not reliable, DPT and TOPV may be given at the 15-month visit.
5. Combined tetanus and diptheria toxoid (adult type).

Table 2.[5] Recommended Primary Immunization for Children Not Immunized in Infancy.

1 Through 5 Years of Age	
First visit	DPT, TOPV, Tuberculin Test
1 mo. after first visit	Measles, Rubella, Mumps*
2 mos. after first visit	DPT, TOPV
4 mos. after first visit	DPT (TOPV optional)
10–16 mos. after first visit	DPT, TOPV
Age 14–16 years	Td—repeat every 10 years

* Not routinely given before 15 months of age

6 Years of Age and Over	
First visit	Td, TOPV, Tuberculin Test
1 mo. after first visit	Measles, Rubella, Mumps
2 mos. after first visit	Td, TOPV
8–14 mos. after first visit	Td, TOPV
Age 14–16 years	Td—repeat every 10 years

Note: Exceptions to the recommended procedures include:

1. Immunization of children immunized in infancy,
2. Immunization procedures on exposure to disease,
3. Immunization of children with neurologic disorders,
4. Immunization during immunodepressive therapy,
5. Other unusual circumstances.

innocuous disease? Yet mumps is not only uncomfortable as a disease but is regarded as the leading cause of unilateral deafness in children.[6] The numbers are small but we should not accept any since they are so easily preventable.

Measles vaccine has caused concern due to its connection with subacute sclerosing panencephalitis. It appears likely that the vaccine is associated with SSPE, but at a rate 5-20 times less than with naturally occurring measles.[7] Nor should the other sequelae of measles be ignored; measles encephalitis is itself an often devastating disease.

Vaccine-related polio is another worry and must be considered in discussing immunizations with parents, but in the eight years of oral polio vaccine use, the cases have been very few. To the present there have been only ten vaccine-associated cases of polio in healthy recipients, 34 cases in contacts of recipients, and 11 cases in persons with immune deficiency diseases. This is a small number when one considers that close to 200 million doses have been dispensed in those eight years.[8]

All the discussion, particularly in the lay and legal press, has made us once again consider the use of the probably safer Salk killed virus vaccine. This is specifically not recommended, except in a few circumstances, since it produces less herd immunity, no gut immunity, is harder to give (injection), and must be boosted every two to three years.[9]

Much has been done in the past 30 years to free us from the diseases that have plagued us since the dawn of time. Smallpox has been eradicated, and many other diseases have been brought under control. Much, however, remains to be done to bring these benefits to all of our population. The mechanisms we develop today for this will presumably serve us in the next few years as we move to immunize our people with other vaccines designed to protect against pneumococcal pneumonia, meningococcal meningitis, and even tooth decay. The prevention of these preventable diseases has become a national and state priority giving recognition to an area long prominent in the practices of primary care physicians.

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GUIDE FOR USE OF (

IMPORTANT: Avoid immunizing persons ill or febrile in prece
There are variations in potency and in content o

DISEASE	IMMUNIZING AGENT	AGE RANGE	
DIPHTHERIA, TETANUS AND PERTUSSIS	Toxoids of diphtheria and tetanus, alum precipitated or adsorbed, combined with pertussis antigen.	For young children from 2 months through 6 years.	T ir F m
TETANUS[1] DIPHTHERIA	Toxoids of tetanus and diphtheria, alum precipitated or adsorbed, combined. (Contains 1–2 Lf units diphtheria toxoid).	Over the age of 6 years	T ir T m
POLIOMYELITIS	Attenuated (live) trivalent oral poliovirus vaccine. Types 1, 2, 3 combined.	Children, age 2 months through 18 years.	1 2
MEASLES 2, 3 (Rubeola)	Further attenuated (live) measles virus vaccine (Schwarz-strain).	All children, age 15 months or over who have not had measles.	C c
RUBELLA[2]	Attenuated (live) rubella virus vaccine (duck embryo).	Children from 15 months to puberty	C c
MUMPS[2]	Attenuated (live) mumps virus vaccine.	Susceptibles age 15 months or older.	C c
HEPATITIS, INFECTIOUS	PASSIVE: Immune serum globulin.	All ages, for pre-or post exposure.	C ir
TUBERCULIN TESTING	1) PPD—intermediate 2) Multiple puncture tests.	All ages	1 2

[1]Monovalent diphtheria and tetanus toxoids are available as alum precipitated or adsorbed preparations for us

[2]Combined vaccines available: combined measles/rubella vaccine, combined measles/mumps/rubella vaccine } One injection: 0.5cc subcutaneous However, when either or both of so that a greater percentage of ch

[3]Reimmunization with measles vaccine is advised if a child under 18 years was immunized (1) under 12 mont

NOTE: Smallpox is no longer recommended for routine use except when traveling to countries in which it i

VIRGINIA STATE DEPARTMENT OF HEALTH
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Immunization Activities

MMUNIZING AGENTS

ead the description and directions supplied with each product.
which patients may be sensitive, such as egg, penicillin or foreign serum.

RATION	INTERVAL BETWEEN DOSES	REIMMUNIZATION (BOOSTERS)	COMMENT
0.5cc each, 0.5cc intra-	4–6 weeks 1 year	At age 4 years or prior to school admission. Dose: 0.5cc I.M.	Do not use after age 6 years. Primary series should never be restarted.
.5cc each, .5cc intra-	4–6 weeks 1 year	Every 10 years for life.	Primary series should never be restarted.
s e	1) 6–8 weeks 2) One year later	On entering school; otherwise not routinely recommended.	
5cc sub-	1) Duration of immunity has not been established. 2) Protection may be afforded if vaccine is given within 2 days of exposure.		Fever and rash may occur.
5cc sub-	Duration of immunity has not been established.		Fever, rash, arthralgia occur rarely in children. More common in adult women.
5cc sub-	Duration of immunity has not been established.		Priority use of vaccine for adolescent and adult susceptibles.
01cc per lb.,	May be repeated as indicated by repetition of exposure.	Temporary immunity (passive): 4–6 weeks	Provides passive immunity. Most applicable for household contacts and foreign travelers.
mal nt pressure to	When indicated by exposure or disease incidence. Recommended prior to the use of live measles vaccine.	Do not use within 2 months following administration of live virus vaccines. READ AT 48–72 HOURS.	

tigen is desired.

age 15 months. Mumps and/or rubella vaccine may be given as early as 12 months of age.
are given in combination with measles vaccine, immunization should be delayed until 15 months of age
to the measles component.

ny age with inactivated vaccine; (3) with Edmonston strain and excessive amount of gamma globulin.

New Approaches in the Management of Sexually Transmitted Diseases

Michael F. Rein, MD, *Charlottesville, Virginia*

Newly recognized features of gonorrhea and other sexually transmitted diseases pose potential clinical problems for the practitioner and require new approaches to patient management. The author discusses specific problems, procedures, and therapies.

BETWEEN 1966 and 1975, the number of civilian cases of gonorrhea reported in the US increased by about 15% each year. During calendar year 1976, however, the incidence of gonorrhea dramatically slowed its rise, with the number of reported cases increasing by less than 0.5% nationally. During the first nine months of 1977, the number of reported cases actually decreased by 1.7% over the comparable period in 1976.

Reported gonorrhea incidence in the state of Virginia has paralleled the national findings. During the first ten months of 1977, approximately 19,000 cases of gonorrhea were reported in Virginia; this represents a 3.2% drop from the first ten months of 1976.[1] A concurrent drop in the incidence of reported syphilis suggests that control of sexually transmitted diseases may be improving.

But because of the continued high incidence of the disease, gonorrhea remains a problem for all medical practitioners in Virginia. An additional concern has been an increasing resistance of the gonococcus to antibiotics generally used in treatment of gonorrhea.

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Presented at the Annual Meeting of The Medical Society of Virginia, Williamsburg, Virginia, October 15, 1977.

Beginning in 1960, there was a gradual rise in the percentage of strains relatively resistant to penicillin as well as an increase in the peak level of resistance observed in this country. Gonococcal resistance to ampicillin and tetracycline also increased. Indeed, individual isolates which are more resistant to penicillin tend also to be more resistant to ampicillin and tetracycline.

This resistance to multiple antibiotics is due to successive chromosomal mutations, each conferring slightly greater resistance. In 1972, however, the trend toward greater resistance stopped and to some extent actually reversed itself. Gonococci isolated now in this country are no more resistant to penicillin than were gonococci studied four years ago, and there is some tendency toward increasing sensitivity to tetracyclines.[2] Reversal of the dangerous trend toward increasing resistance may have resulted from the widespread acceptance of highly effective, large dose therapies for gonorrhea. The regimens and their approximate failure rates are shown in Table 1.

Several comments should be made about the treatment regimens. Aqueous procaine penicillin G together with probenecid remains the treatment of choice, because it alone has been shown to abort coincident incubating syphilis. If a patient has contracted syphilis and gonorrhea from a single sexual exposure, the gonorrhea is likely to be diagnosed before the patient has developed either clinical or

serological evidence of treponemal infection. If this patient's gonorrhea is treated with the procaine penicillin regimen, his syphilitic infection will also be cured. Spectinomycin will not abort incubating syphilis, and the reliability of the other regimens has not yet been determined. The regimen combining ampicillin and probenecid has a failure rate nearly twice that of other regimens and should not be considered a simple oral equivalent of procaine penicillin. Ampicillin, amoxicillin, and spectinomycin are relatively ineffective in the treatment of pharyngeal gonococcal infection; procaine penicillin or tetracycline is preferred for this condition.

Spectinomycin is the treatment of choice for patients whose gonorrhea is not cured by initial treatment with one of the other regimens. This is because organisms relatively resistant to any of the penicillins or tetracyclines tend to be relatively resistant to the rest of these antibiotic types. A patient who is not cured by initial therapy with a tetracycline or a penicillin drug is likely to be infected with an organism relatively resistant to all of them; re-treatment with one of the other drugs in these groups is likely to result in another treatment failure. Gonococci relatively resistant to penicillins and tetracyclines are, however, reliably eradicated by spectinomycin.

In March of 1976, a gonococcus isolated from a patient in Maryland was found to elaborate a penicillinase and was therefore absolutely resistant to levels of penicillin attainable by standard methods of administration. This patient had contracted his infection in the Philippines; investigation showed that penicillinase-producing gonococci were highly prevalent in that area of the world, accounting for up to 40% of strains isolated from prostitutes. Early cases identified in the US were associated with sexual contacts in the Philippines or elsewhere in the Far East, but, more recently, we have seen cases involving no apparent contact in the Far East.[3] As of September 1977, penicillinase-producing gonococci had been isolated from 216 patients in the US. The problem now seems to be under control, since only 12 new cases were reported between July and September of 1977. The failures of the penicillinase-producing gonococcus to become more widespread in this country is probably due to careful contact-tracing and case-finding by state and county health departments. Penicillinase-producing gonococci continue to be very rare in this country and do not materially affect our concepts of the treatment of uncomplicated gonorrhea.

Table 1. Alternative Therapies for Uncomplicated Anogenital Gonococcal Infection.

Regimen	Approximate failure rate
Aqueous procaine penicillin G, 4.8 million units, i.m. (divided into at least two doses and injected at different sites in one visit), together with probenecid, 1 gm po	4%
Amoxicillin, 3 gm po, as a single dose	4%
Ampicillin, 3.5 gm po, with probenecid, 1 gm, po	9%
Tetracycline hydrochloride, 1.5 gm po, as a single dose, followed by 500 mg po qid, for 4 days (total dose = 9.5 gm) [Drugs should be taken on empty stomach and not with milk or antacids]	4%
Spectinomycin, 2 gm im	5%

Table 2. Clinical Features of Urethritis.

Features	Gonococcal urethritis	Nonspecific urethritis
Usual incubation period	1–5 days	3–21 days
Onset	abrupt	gradual
Symptoms	prominent	milder
Dysuria only	2%	15%
Discharge only	27%	47%
Discharge and dysuria	71%	38%
Discharge	purulent (91%)	mucoid (58%)

Data from Jacobs NF, Kraus SJ.[4]

The gonococcus acquires its penicillinase-producing ability when it picks up a plasmid. Plasmids are circular bits of DNA which exist in the cytoplasm of bacteria distinct from the bacterial chromosome. Plasmids may be passed from one bacterium to another, even between different species. The genes that they carry direct processes that are not necessary for bacterial viability but are of clinical significance and include such important properties as resistance to antibiotics and toxic ions, changes in antigenic structure of the cell surface, alterations in bacteriocin production, and modification of pathogenicity. When a gonococcus acquires the particular plasmid, it becomes capable of elaborating an enzyme which chemically destroys penicillin, ampicillin, and amoxicillin. The plasmid does not increase bacterial resistance to nonpenicillin antibiotics, but, unfortunately, the strains of gonococci which have thus far acquired the plasmid are coincidentally, because of mutations on the bacterial chromosome, relatively resistant to tetracyclines and erythromycin. Penicillinase-producing gonococci remain sensitive to spectinomycin.

When the practicing physician sees a patient with gonorrhea who remains infected after treatment with penicillin, he cannot be certain whether he is dealing with a penicillinase-producing strain. Fortunately, the treatment of choice for resistant organisms, whether penicillinase-producing or not, is specti-

nomycin, 2 gm im. Organisms recovered after initial treatment should be sent to the state laboratory for detection of penicillinase production.

Within the past ten years, urethritis due to agents other than the gonococcus has become increasingly prevalent.[4] Gonorrhea is now believed to be responsible for less than one-half of all cases of symptomatic urethritis in the US. In some higher socioeconomic groups, gonorrhea causes less than 10% of urethral symptoms. To equate urethritis with gonorrhea results in significant diagnostic error. Gonorrhea may be reliably differentiated from nongonococcal urethritis on the basis of a Gram stain of urethral discharge. Gram-negative cell-associated diplococci are observed in 95% of patients subsequently shown by culture to have gonorrhea. The organisms are observed in less than 3% of patients who cannot be shown by culture to have gonorrhea. Patients with a gram-positive smear of urethral discharge should be treated for gonorrhea on their initial visit.

Trichomoniasis, lymphogranuloma venereum, and urinary tract infections are rare causes of nongonococcal urethritis. The vast majority of patients with nongonococcal urethritis have so-called "nonspecific urethritis" (NSU). The syndrome of nonspecific urethritis has at least two causes, *Chlamydia trachomatis* and *Ureaplasma urealyticum. C trachomatis* is isolated from about 50% of patients with NSU. This organism is an obligate intracellular parasite which resembles bacteria in several ways; it is sensitive to antibiotics, including tetracyclines, erythromycin, and sulfonamides, but is relatively resistant to the concentration of penicillin achieved during the treatment of gonorrhea. Men with nonspecific urethritis who are not infected with *C trachomatis* are likely to be infected with *U urealyticum* (T-strain mycoplasma), a small, free-living agent absolutely resistant to penicillin and sulfa drugs but sensitive to tetracyclines and erythromycin. Both *C trachomatis* and *U urealyticum* require special techniques for isolation, but infection with either pathogen is likely in the patient who has acute nongonococcal urethritis. The syndrome produced by these agents differs from gonorrhea in terms of incubation period and symptoms (Table 2). NSU usually produces symptoms milder than those of gonorrhea and many men present with a mucoid rather than a purulent discharge; dysuria, if present, is mild.

Patients with nonspecific urethritis should be treated with tetracycline hydrochloride, 500 mg po, four times a day for ten days. Patients unable to take tetracycline may be treated with oral erythromycin in the same doses. Carriage of the agents of nonspecific urethritis usually produces no symptoms in women, although it has been associated with an increased frequency of cervicitis. The organisms are clearly sexually transmitted, and asymptomatic sexual partners of patients with NSU should be treated in order to prevent reinfection of the men and to prevent development in women of complications such as chronic cervicitis, pelvic inflammatory disease, or transmission of the agents to the eyes of newborns during birth.

Sometimes, a patient presents for treatment of gonorrhea and, after therapy with penicillin, becomes transiently better only to note a subsequent return of mild urethral symptoms. Reexamination fails to reveal gonococci. The patient is said to have postgonococcal urethritis, a syndrome which probably results from simultaneous infection with the gonococcus and an agent of nonspecific urethritis. Three or four days after the time of infection, the patient notes the onset of symptoms of gonorrhea and is treated with penicillin, which promptly relieves the gonorrhea but has no effect on the agents of NSU. After the longer incubation period for NSU has passed, the patient develops the symptoms associated with NSU. Since postgonococcal urethritis is essentially nongonococcal urethritis appearing after treatment for gonorrhea, it is treated just as nongonococcal urethritis is on its initial presentation.

We have recently become aware of the prevalence and epidemiologic significance of asymptomatic gonococcal urethral infection in men. If 100 men contract gonorrhea in the urethra, about 80% will develop symptoms within ten days. Another 17% will become symptomatic after a somewhat longer time. About 3%, however, will remain asymptomatic for periods of up to 5-6 months.[5]

Patients with urethral symptoms usually seek medical attention and are cured. Asymptomatic patients, however, tend to collect in any population because they do not seek treatment. Asymptomatic urethral infection is identified frequently among sexual partners of women in whom gonorrhea is detected through screening programs or because they develop symptomatic complications. About one-third of the infected sexual partners of women whose gonorrhea is detected in screening programs are asymptomatic. Among women presenting with pelvic inflammatory disease or disseminated gonococcal infection, 40% of their asymptomatic male partners were found to be infected.[5] The message is plain: When gonorrhea is detected in a woman, it is necessary to work up and probably treat all of her sexual partners for gonorrhea, regardless of whether or not there are urethral symptoms. Asymptomatic urethral infection is also common and should be looked for in men presenting with disseminated gonococcal infection.

References on request.

Enteric Infections: Epidemiology and Management

Richard L. Guerrant, MD, *Charlottesville, Virginia*

Medical understanding of acute diarrheal illnesses has increased greatly in recent years. The author reviews the major types of enteric infection and presents simple but effective means of diagnosing and treating diarrheal illnesses.

THERE has been a dramatic increase, in the last five years, in our fund of information about acute diarrheal illness and the bacterial and viral agents capable of causing various types of acute gastrointestinal illness. Now recognized as etiologic agents of what is commonly called "gastroenteritis" are *Escherichia coli* that produce enterotoxins which cause fluid secretion, other *E coli* capable of causing inflammation and tissue destruction, and enteric viruses such as rotaviruses and parvovirus-like agents. Also, with the development of new diagnostic tools, we have increased our understanding of the epidemiology of acute diarrheal illness.

Enteric infections can be classified according to their pathophysiologic mechanisms (Table 1). By far the most common of the three types is a noninflammatory infection which may be caused by *Vibrio cholerae* and enterotoxigenic *E coli* and characterized by a watery diarrhea which is the result of enterotoxin action in the proximal small bowel. Noninflammatory diarrhea may also be caused by rotaviruses, parvovirus-like agents, and *Giardia lamblia,* but these agents' actions in the small bowel are not yet fully understood.

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Presented at the Annual Meeting of The Medical Society of Virginia, Williamsburg, October 15, 1977.

Inflammatory enteritis, the most prevalent example of which is acute shigellosis, is caused by bacterial invasion of the mucosa in the colon; a dysenteric diarrhea, containing pus and, occasionally, blood, is characteristic of this process. Certain *E coli* have recently been found to have an invasive capacity similar to that of shigellae, and they can thereby cause a dysenteric illness. What is commonly called "salmonella gastroenteritis" is a variety of inflammatory ileocolitis caused by *Salmonella enteritidis.*

A third type of enteric infection involves organisms which penetrate the intact mucosa in the distal small

Table 1. Three Types of Enteric Infection

	I	II	III
Mechanism	Noninflammatory (enterotoxin)	Inflammatory (invasion)	Penetrating
Location	Proximal small bowel	Colon	Distal small bowel
Type of Illness	Watery diarrhea	Dysenteric diarrhea	Enteric fever
Fecal WBC	None	PMN's	Monos
Examples	Cholera Toxigenic *E coli*	Shigellosis Invasive *E coli*	Typhoid fever Yersiniosis

bowel, multiply in lymphatic tissue, disseminate, and cause enteric fever. Typhoid fever is a primary example of this kind of infection. *Yersinia enterocolitica* can also cause a mesenteric adenitis, and the illness may mimic acute appendicitis.

A simple office diagnostic test which requires only microscopic examination of a stool specimen can be used to identify the specific type of enteric infection in a given patient. A fleck of fecal mucus is mixed with a drop of methylene blue on a slide, covered with a cover slip, and examined as a wet mount under medium and highpower magnification. The absence of leukocytes in the fecal mucus is usually characteristic of noninflammatory infections. The stools of most patients with inflammatory infections contain polymorphonuclear leukocytes; those of patients with typhoid fever contain mononuclear leukocytes. It is important that the test for fecal leukocytes be performed within minutes of the time a stool specimen is obtained; the microscopic examination must take place before the rapid destruction of cells occurs. Prompt performance of the test may also permit identification of motile trophozoites of such parasites as ameba or giardia, larvae of strongyloidiasis, or eggs of ascariasis or trichuris.

Special laboratory procedures are required for identification of some recently recognized agents of enteric infections. We now know that some *E coli* are pathogenic in that they are invasive or enterotoxin-producing, and these organisms must be differentiated from those *E coli* which predominate in the normal aerobic bowel flora. We are now able to test *E coli* for invasiveness and for particular enterotoxins. The Sereny test for invasiveness involves inoculation of *E coli* into guinea pig conjunctiva; certain *E coli* produce a shigella-like inflammatory conjunctivitis in this animal model within a few days. Enterotoxins produced by *E coli* are identified as either heat labile (LT) or heat stable (ST). Heat labile toxin acts much like cholera toxin and causes isotonic fluid secretion in the small bowel; heat stable enterotoxin produced by *E coli* appears to cause fluid secretion in the small bowel by another mechanism.

Recent analysis of epidemiologic data which take into account newly recognized causes of diarrheal illness shows that any enteric infection a person acquires depends on (a) how many pathogenic organisms are ingested; (b) where the person is located; (c) when the person is in that location; and (d) the person's age and past experience with infectious diseases. With the exception of shigellae, most bacterial pathogens—such as salmonella, toxigenic *E coli,* and *V cholerae*—must be ingested in great quantity and hundreds of thousands of organisms are usually required for infection. In contrast, acute shigellosis can follow ingestion of as few as 10 to 100 viable organisms.

Enterotoxigenic *E coli* and shigellae only rarely produce acute diarrheal illnesses in persons living in temperate climates and in areas where there are advanced sanitation facilities. These organisms are, however, common causes of diarrhea during summer months in warmer climatic zones and where sanitation is poor or nonexistent. The American tourist who has never been heavily exposed to bacterial enteric pathogens is susceptible to infection with either the LT or ST type of enterotoxigenic *E coli* when he visits a tropical country where sanitation facilities are poor.

Little is known about the mechanisms by which viral agents cause diarrheal illnesses. Prospective studies of gastrointestinal illnesses affecting families living in Cleveland, Ohio, and Charlottesville, Virginia, reveal a consistent peaking of gastrointestinal illnesses during the winter months. The infections tend to occur most frequently and in a cluster pattern in families with young children. This seasonal pattern differs from that of enteroviral illnesses caused by Coxsackie and ECHO viruses (late summer to early fall peak). Data from the family studies suggest that enteroviruses are not major causes of gastrointestinal illnesses. We now have evidence which links the 70-nm wheel-like rotaviruses with winter diarrheal illnesses in children under two years of age; most adults have acquired antibody to rotaviruses.

Another viral pathogen of diarrheal illness was first recognized during a November 1968 outbreak of gastroenteritis in Norwalk, Ohio. This tiny (27 nm) parvovirus-like agent appears to cause "winter vomiting disease" in older children and adults. Rotaviruses can be readily identified by electron microscopy or immunologic techniques, but parvovirus-like agents are much less easily recognized by means of electron microscopy and their identification by immunologic means has been limited to date by antigenic variation.

Therapy for most noninflammatory diarrheal illnesses is simple and effective. Much of the fluid and electrolyte loss can be counteracted by an oral therapeutic regimen of fluid and electrolyte replacement which includes glucose or sucrose. Despite the action of *E coli* and cholera enterotoxins, small intestinal absorption of glucose continues. Because glucose absorption is coupled with that of sodium and water, oral glucose/electrolyte solutions administered to patients can replace most of the isotonic fluid lost. A standard oral fluid regimen consists of 3.5 gm sodium chloride/liter of water, 2.5 gm sodium bicarbonate/liter, 1.5 gm potassium chloride/liter, and 20 gm glucose/liter. A similar solution may be prepared for

home use: 4 level tablespoons sugar, ¾ teaspoon salt, 1 level teaspoon sodium bicarbonate, and 1 cup orange juice added to water to make one liter of fluid. The salt may be deleted in cases of mild diarrhea or when there is concern about hypertonicity, especially in children. Hypertonic solutions should be avoided. The electrolyte contents of commonly available soft drinks vary greatly. Excessive carbohydrate loads might contribute to osmotic diarrhea.

The simple diagnostic and therapeutic measures described above—examination for fecal leukocytes and oral glucose- or sucrose-containing electrolyte solutions—should be applicable to widespread use in physicians' offices, in clinics, and in locations where extensive laboratory and hospital facilities are limited or nonexistent. When the clinical or epidemiologic setting and the verified presence of leukocytes in the stool samples lead clinicians to suspect an outbreak of symptomatic shigellosis, therapy for patients should include an absorbable oral antibiotic (e.g., ampicillin or sulfamethoxazole-trimethoprim). If typhoid fever is suspected, physicians should consider administering chloramphenicol, ampicillin, or sulfamethoxazole-trimethoprim to persons with the illness. ■

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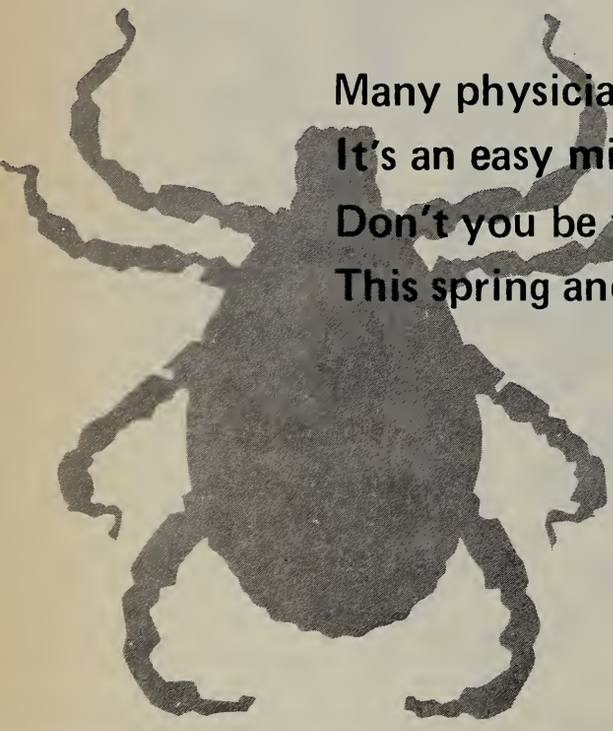
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Diagnostic Values of Radionuclide Imaging in Acute Infections

Charles D. Smith, MD, and Michael O. Stone, PhD, MD, *Roanoke, Virginia,* and Richard Whitehill, MD, *Charlottesville, Virginia*

Early diagnosis of acute osteomyelitis and differentiation between osteomyelitis and cellulitis is made possible by radionuclide imaging, and the patient thus is given an early start of correct treatment.

EARLY DIAGNOSIS of acute hematogenous osteomyelitis is essential to provide the attending physician a basis for adequate treatment. Radiographic diagnosis in the early stages of the disease is seldom possible because characteristic change is rarely present until ten or 12 days, or longer, after the onset of symptons;[1] and clinical signs are often too mild to support the diagnosis because patients are often given antibiotic treatment at the first sign of infection. But radionuclides can be used to obtain early diagnoses.

The value of radionuclide imaging in osteomyelitis was reported in this journal in 1974[2] and has been reported in other journals.[3–5] Gilday et al reported the advantage of the use of combined "blood pool" and delayed static imaging in the early diagnosis of osteomyelitis and in the differential diagnosis between osteomyelitis and cellulitis.[6]

Early identification of the cause of infection aids in planning treatment: Effective treatment of osteomyelitis often involves at least 21 days of intensive antibiotic administration, whereas cellulitis may respond favorably in less than ten days.

From the Roanoke Memorial Hospitals (Drs. Smith and Stone) and the University of Virginia (Dr. Whitehill). Address correspondence to Dr. Smith at the Hospital, Belleview at Jefferson Streets, Roanoke VA 24033.

Submitted 9-25-77.

Methods of Imaging

Technetium-99m labeled phosphates can be used for bone imaging. We administer 100 microcuries of labeled phosphate per pound of the patient's body weight, injected into a peripheral vein away from the area of suspected infection. At the time of injection, a stationary scintillation detector (gamma camera) is positioned over the area of interest and serial images are made at 3-second intervals as circulating blood flows to soft tissues and bones in the area. Approximately 2 hours after the radioactive material has been injected, we make static images with the same detector, always including the opposite extremity for comparison, often making images in more than one projection.

Case Reports

Case 1.

A 14-month-old boy was admitted to the hospital on 28 October 1976, five days after he had developed a "cold". At the time of admission, he had a fever of 102° F (38.8° C) and would not bear weight on his right leg. There was no history of injury. His right distal thigh and proximal half of his right lower leg were swollen, red, and warm. The range

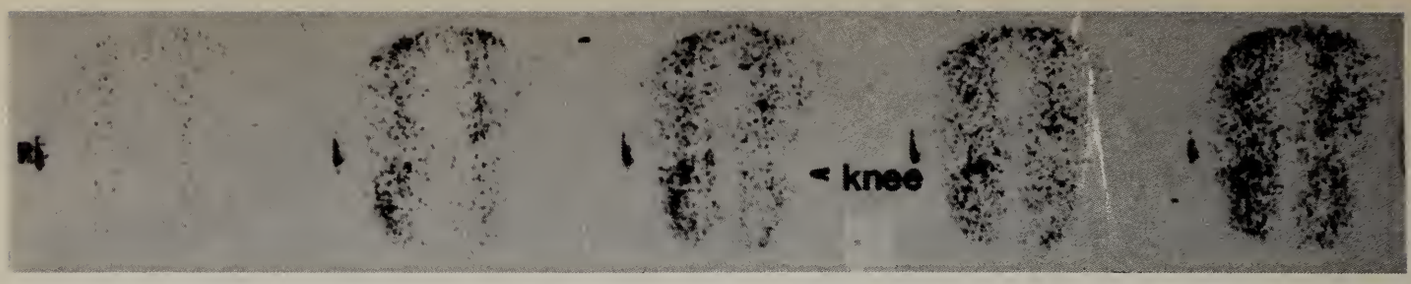


Fig 1A. Selected frames from a blood pool imaging study show more than normal radioactivity in the region of the upper end of the right tibia 9 through 12 seconds after injection of Tc-99m diphosphonate.

of motion of his hip, knee and ankle joints approached normal.

28 October 1976 Laboratory: WBC 22,100; sedimentation rate 53.

28 October 1976 Radiography of the right leg was normal.

28 October 1976 Nucleography, using both blood pool imaging and static images showed evidence of osteomyelitis of the proximal half of the right tibial shaft.

29 October 1976 Aspiration of the right upper tibia: staphylococcus albus, coagulase positive.

Intravenous administration antibiotics was begun immediately after admission and continued for approximately three weeks and he was then put on oral antibiotics for six weeks. His temperature became normal one week after antibiotics were started, and in two weeks his sedimentation rate had returned to normal. A followup examination in May 1977 revealed no abnormality.

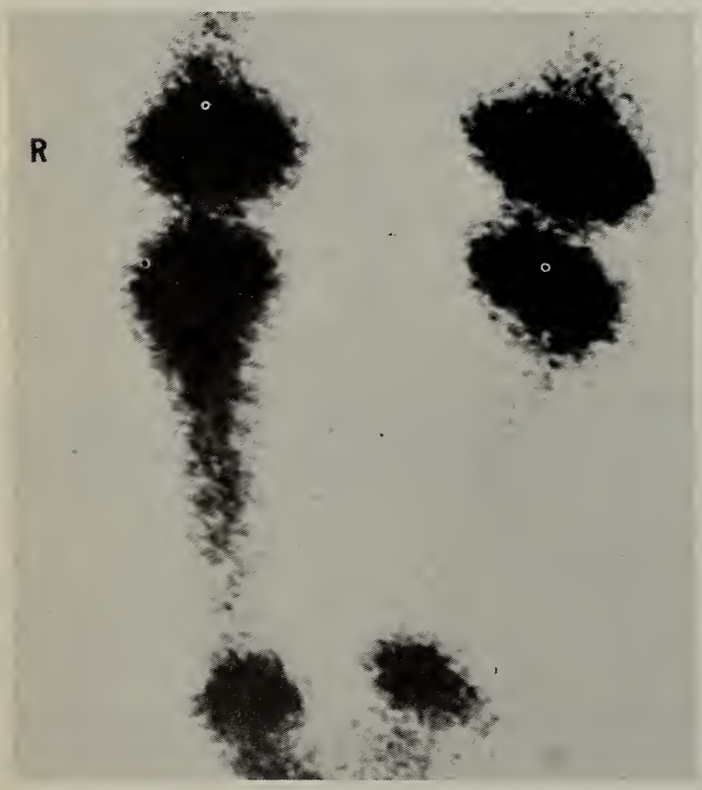


Fig. 1B. Images of knees and legs 3 hours after injection of Tc-99m diphosphonate show more radioactivity in the upper end of the right tibia than in the opposite tibia, consistent with osteomyelitis. (Case 1.)

Case 2.

An 11-year-old girl complained of pain in the distal half of her left forearm. Twenty-four hours after onset of pain her left distal forearm was swollen and red and she complained of increased pain. She was given 2 grams of penicillin daily for two days until 5 November 1975, when she entered the hospital. There was no history of injury. On admission, the physical findings were the same as stated above. She had a fever of 99.8° F (37.6° C) and a WBC of 6,800. (These reactions were believed low because of the antibiotic treatment.)

5 November 75 Laboratory: WBC 6,800; sedimentation rate 47.

5 November 75 Radiography (6 days after onset of symtoms) was normal.

7 November 75 Nucleography, using both blood pool imaging and static imaging, showed osteomyelitis of the distal end of the left radius.

14 November 75 radiography showed some lysis of the distal end of the left radius consistent with absorted osteomyelitis.

Beginning on 5 November 75, the patient was treated with intravenous antibiotics for three weeks and discharged to take oral antibiotics for three months. A followup examination in May 1977 revealed no abnormality.

Case 3.

A 7-year-old girl had chicken pox two weeks prior to admission to the hospital, probably not related to the present illness. Four days before admission on 4 April 1977 she began to have pain in her right distal forearm. On admission, she had fever of 103° F (39.4° C) and the distal part of her forearm was swollen and red. There was no history of injury.

5 April 77 Laboratory: WBC 19,500; sedimentation rate 55.

5 April 77 Radiography of the right forearm was normal.

7 April 77 Nucleography, using both blood pool imaging and static imaging, showed evidence of osteomyelitis of the distal end of the right radius.

7 April 77 Surgical exploration of the right distal forearm revealed osteomyelitis of the distal radius.

The patient was on intravenous antibiotics from 7 April through 18 April and then was put on oral antibiotics for six weeks. Three days after admission her fever had re-

turned to normal and remained normal and on 15 April 1977 the sedimentation rate was 39. A followup study in July 1977 revealed no evidence of an abnormality. Further observation will be needed to determine whether a growth abnormality will occur.

Case 4.

A 6-year-old boy was admitted to the hospital on 26 April 1976 with a two-day history of pain and swelling in the region of his right knee, posteriorly. There was no history of injury. Five days prior to admission and two days prior to onset of pain in the knee, he had flu-like symptoms including nausea and vomiting and a fever of 105° F (40.4° C). The fever was still 105° F on admission, and he had tenderness in the right popliteal fossa, a suggestion of some fluid in the knee joint, and local redness and swelling. He had several tender right inguinal nodes.

26 April 76 Laboratory: WBC 11,700; sedimentation rate 48.

26 April 76 Radiography of the knees showed no evidence of bone disease.

26 April 76 Nucleography, using both blood pool imaging and static imaging, showed no evidence of osteomyelitis.

26 April 76 Five ccs of fluid was aspirated from the right knee; culture was negative.

On the basis of the above findings, a diagnosis of cellulitis was made. He was treated with antibiotics and recovered in one week.

An observation in July 1977 revealed him to be well.

It should be noted that under some conditions radionuclide images may appear as "cold" areas, especially if imaging is done within 24 hours of onset of symptoms. Readers who might be interested in the different possible image patterns in bone infections and might want a good general review of all aspects of bone imaging are referred to *Current Problems in Radiology, Vol 1, No. 5,* by Koenigsberg and Freeman, Year Book Publishers, Chicago, 1976.

Summary

Our experience confirms the experience reported by other observers: radionuclide imaging in suspected osteomyelitis or cellulitis offers the best known method of early diagnosis and differential diagnosis between the two entities. Combined "blood pool" and static imaging is quick, easy to perform, requires no significant preparation of the patient and provides diagnoses early enough to establish a program of treatment that will prevent crippling sequellae.

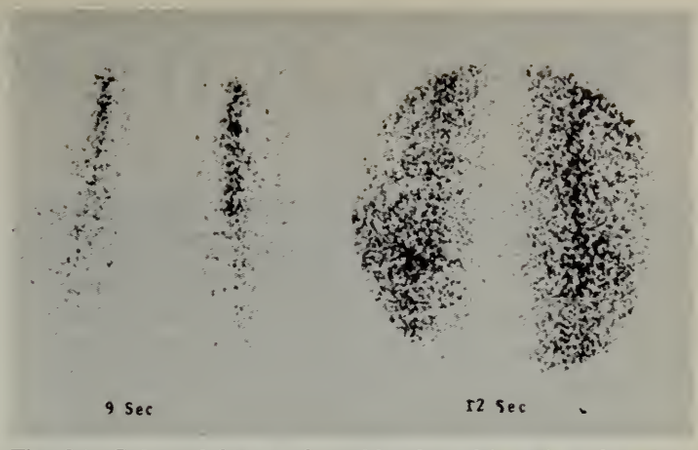


Fig. 2A. Selected frames from blood pool imaging, 9 and 12 seconds after injection of Tc-99m diphosphonate, show increase in amount of radioactivity in region of right knee (arrow). (Case 4.)

Acknowledgments

The authors are grateful to R. M. Miles, MD, P. E. Bowles, Md, and T. E. Strong, MD, for providing information about the cases here reported.

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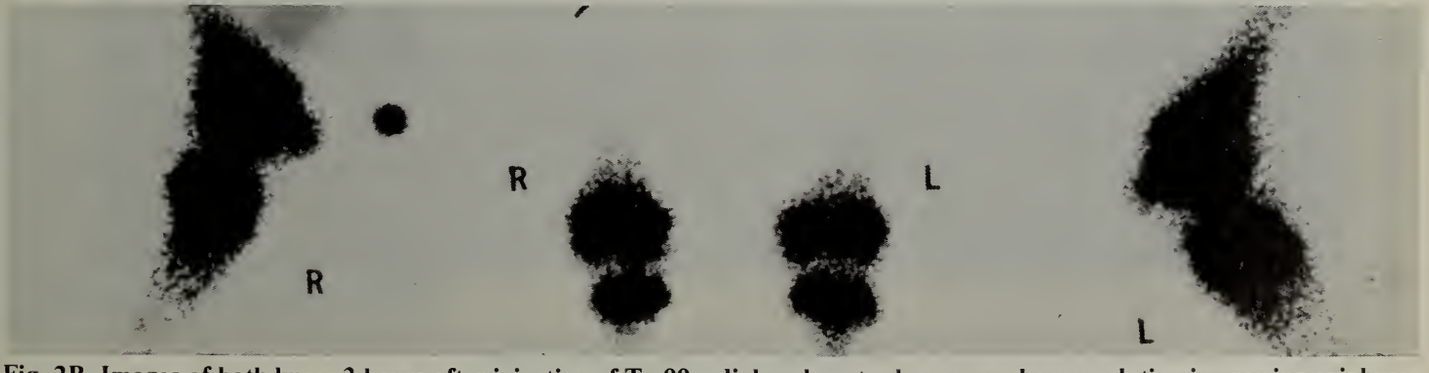


Fig. 2B. Images of both knees 3 hours after injection of Tc-99m diphosphonate show normal accumulation in growing epiphyses but no evidence of osteomyelitis. (Case 4.)

VIRGINIA AUTHORS

Value of Arterial Pressure Measurements in the Proximal and Distal Part of the Thigh in Arterial Occlusive Disease. ROBERT W. BARNES, MD, *Richmond,* and SHARON E. HEINTZ, GEORGE E. BONE, MD, EARLENE E. SLAYMAKER, RN, and ANDREW C. HAYES, *Iowa City, Iowa.*

A prospective study was carried out comparing two techniques of segmental arterial pressure measurements of the leg to detect, localize and quantify regional arterial occlusive disease. The measurement of pressures of the proximal and distal parts of the thigh with the narrow cuff technique permitted correct anatomic localization of aortoiliac, femoropopliteal or combined disease in 78 per cent of diseased extremities, including all limbs with isolated aortoiliac or femoropopliteal disease. A single wide cuff arterial pressure measurement of the thigh correctly localized arterial obstructions in only 19 per cent of diseased extremities. Although a wide cuff is associated with less artifactual elevation in measured arterial pressure at the thigh, this advantage is outweighed by the limitation of diagnostic accuracy in localizing segmental arterial occlusive disease. We recommend that segmental arterial pressure measurements of the limb be made at four levels on the lower extremity, including arterial pressures of the proximal and distal parts of the thigh to achieve maximal diagnostic accuracy. Surg Gynecol Obstetr 146:337-343, 1978

Endobronchial Hodgkin's Disease. COMDR. CHARLES J. DONLAN, JR., MC, USN, and COMDR. JAMES W. REID, MC, USN, *Portsmouth.*

Endobronchial involvement with Hodgkin's disease has been reported infrequently. A 26-year-old woman with previously diagnosed nodular sclerosing Hodgkin's disease had substernal chest pain and a right middle lobe infiltrate. Fiberoptic bronchoscopy showed nodular endobronchial lesions located at the carina, the right mainstem bronchus, and the right middle lobe orifice. A biopsy specimen of one of these lesions showed Hodgkin's disease. The patient was then treated with sequential systemic chemotherapy. Repeated bronchoscopy showed complete resolution

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of the endobronchial lesions, and the patient has remained in complete remission for 24 months. JAMA 239:1061-1062, 1978

Dermatofibrosarcoma Protuberans: Case Reports and Review of Literature. NEIL L. SIMSTEIN, MD, RALPH J. TUTHILL, MD, EDWARD E. SPERBER, MD, PAUL J. KOVALCIK, MD, and JOSEPH T. MULLER, MD, *Portsmouth.*

Dermatofibrosarcoma protuberans is a soft tissue tumor of low-grade malignant potential. It may occur at sites of previous trauma. Histologically, the tumor is a low-grade sarcoma and may possibly arise from histiocytes, though exact cause has not been ascertained. Treatment consists of wide local excision. En bloc dissection with 5 cm margins is recommended. The depth should be down to and including the fascia. A split-thickness skin graft may be used to close the defect. Careful follow-up is mandatory. Treatment on recurrence is wide local excision. Chemotherapy and radiotherapy do not appear to be of value. South Med J 70:487, 1977

Acute Corneal Injury by Mustard Gas. WALTER J. GEERAETS, MD, SHAHLA ABEDI, MD, and ROBERT V. BLANKE, PHD, *Richmond.*

Described is an acute ocular injury caused by mustard gas. The clinical course was similar to what has been established by laboratory research. Some of the histopathologic events have been discussed in theory since no tissue sample from this reported case was available for examination. South Med J 70:348, 1977.

Venous Aneurysms. MICHAEL H. FRIEDMAN, MD, *Alexandria.*

Primary venous aneurysms are rare lesions, but they can sometimes lead to serious complications. A report of a venous aneurysm in an unusual location is presented, with a review of the literature. South Med J 70:219, 1977.

Adoption in Evolution: Recent Influences on Adoption in Virginia. ANDRE P. DERDEYN, MD, *Charlottesville.*

Adoption is a relatively new and evolving institution. The characteristics of children available for







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adoption are changing. Some hard-to-place children will be helped by subsidized adoption. The concept of children as property of biologic parents continues to shadow efforts to terminate parental rights. Virginia law allows adoption against parental consent if such consent is withheld contrary to the child's welfare, but decisions continue to be based upon whether or not parental behavior has been sufficiently extreme to justify a finding of unfitness. New legislation is required to put the child's interests on a par with those of the parents. South Med J 70:168, 1977.

Medical Education: Retrospective and Prospective Observations. OSCAR SWINEFORD, JR., MD, *Charlottesville.*

Significant advances in medicine have occurred in the past 50 years. Medical education, too, has undergone many changes, and is due for an in-depth study and appraisal similar to that of the 1910 Flexner report. Some of the changes in medical education discussed include excessive emphasis on incurable disease and scientific minutiae instead of practical clinical problems, changes in the roles and images of clinical teachers, importance placed on faculty research, decline in actual patient care, and a new and welcome proliferation of training programs for family physicians. Suggestions are offered for reducing the duration of medical training, and for improving the curriculum and the education of students in medical schools today. South Med J 70:191, 1977.

Non-Union Fractures of the Proximal Humerus: a Method of Treatment Using a Modified Moe Plate. GWO-JAW WANG, MD, STEVEN I. REGER, PHD, and WARREN G. STAMP, MD, *Charlottesville.*

Treatment of nonunion of fractures of the proximal or middle third of the humerus by use of a modified Moe plate is described. We have found this treatment to produce more favorable results than other methods using either internal or external immobilization. Simple modification of an existing mechanically sound device has led to a very useful instrument for the internal fixation of this type of fracture. South Med J 70:818, 1977.

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Erratum

In the excellent clinical note on oral therapy for hypomagnesemia by Michael J. Moore, MD, in the March issue[1], the following table was inadvertently omitted. The Editors very much regret the error.

Clinical Situations Conducive to Hypomagnesemia.

A. Gastrointestinal and Nutritional
   1. Prolonged, severe diarrhea (ulcerative colitis; regional enteritis).
   2. Intestinal malabsorption (idiopathic steatorrhea, tropical sprue, short bowel syndromes from any cause).
   3. Acute and chronic pancreatitis.
   4. Starvation (including treatment of obesity).
   5. Neoplasms; kwashiorkor; cirrhosis of liver.
   6. Chronic alcoholism (thought to be related to inadequate intake of magnesium plus the effect of alcohol in augmenting urinary magnesium excretion).

B. Electrolyte, Renal and Endocrine
   1. Prolonged parenteral fluid administration without magnesium supplementation (common after two weeks, and very common after three weeks).
   2. Prolonged use of diuretics (hypertension, heart failure, ascites).
   3. Renal disease (renal tubular acidosis; diuretic phase of recovery from acute tubular necrosis; gentamycin, viomycin, or capreomycin induced renal injury; familial renal magnesium wastage; rarely in chronic glomerulonephritis and pyelonephritis).
   4. Hyperparathyroidism with osteitis fibrosa cystica, and in post-operative period following surgery for hypoparathyroidism, especially those receiving Vitamin D (which augments excretion of magnesium).
   5. Hyperthyroidism.
   6. Primary and secondary aldosteronism (desoxycorticosterone also causes magnesium wastage).
   7. Lactation.
   8. Diabetic ketoacidosis (becomes apparent following insulin therapy, in fashion similar to hypokalemia).
   9. Malacic bone diseases with hypercalcemia.
   10. Hypocalcemia (from hypomagnesemia).
   11. Resistant hypokalemia (from hypomagnesemia).

1. Moore MJ: Oral therapy for hypomagnesemia. Va Med 105:232-233, 1978

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(Continued on page 457.)

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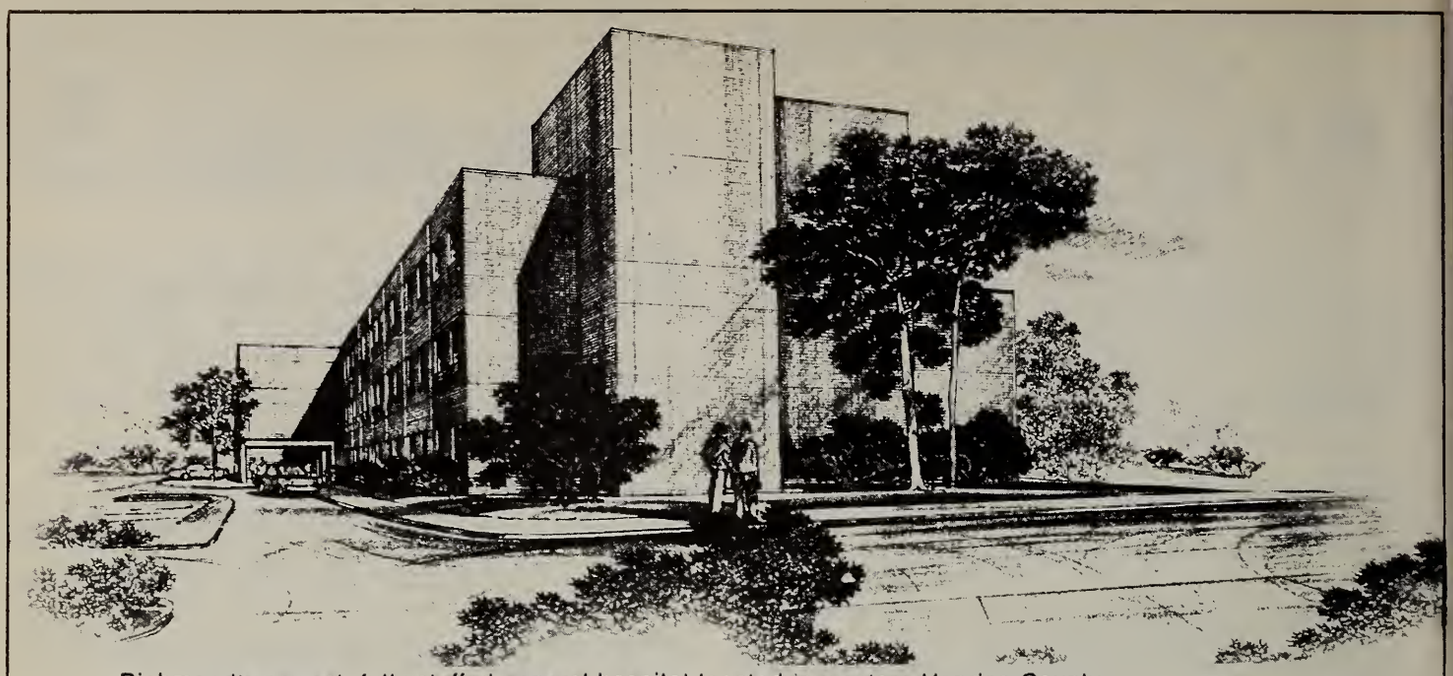
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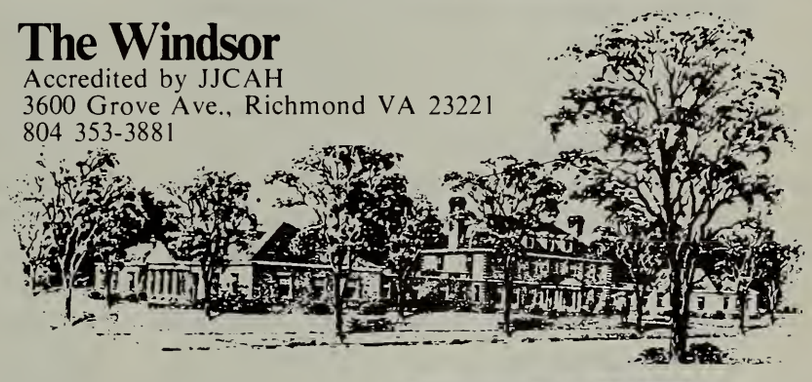
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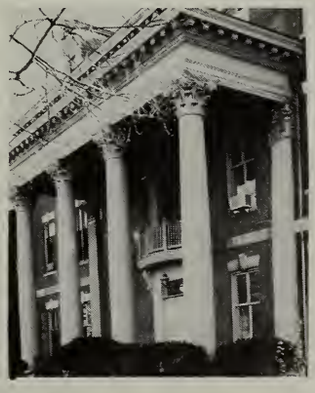
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Medicine at the General Assembly 1978

Here are the bills of greatest importance to Virginia physicians and their disposition by the 1978 General Assembly. For information on other bills that were introduced, or a complete list of all bills relating to medicine considered at this session, write or call The Medical Society of Virginia's staff member for legislation, Willard C. Osburn, at MSV headquarters.

Risk Management. MSV Supported. Enacted.

HB-31 (Philpott) amends the medical risk management legislation adopted during the 1977 session. 1) The bill grants immunity from civil liability to members of any committee of The Medical Society of Virginia or any local component society that is responsible for admitting physicians to the society, or taking disciplinary action against any physician provided that the committee member has not acted in bad faith or with malicious intent. 2) The bill amends the requirement that any hospital or physician that treats a health care provider for chronic alcoholism or drug abuse must report such treatment to the Board of Medicine. Following the 1977 session, it was learned that this reporting requirement conflicts with federal regulation if the treatment is part of a federal program. House Bill 31 makes clear that the state law does not require a report if such a report would violate federal regulations. 3) The bill also provides immunity from civil liability when the Society or a local component society refers a disciplinary matter to the State Board of Medicine rather than undertaking its own investigation of the complaint, so long as the referral is made in good faith and without malice. 4) The bill changes hearings conducted by medical complaint investigation committees appointed by the Board of Medicine from formal to informal proceedings. The formal nature of any subsequent disciplinary proceeding before the State Board is retained. House Bill-31 was introduced at the request of the Society.

Emergency Treatment for Minors. MSV Supported. Enacted.

HB-87 (Emroch) provides that when a person under 18 years of age needs medical treatment, and a parent or guardian or a juvenile judge is unavailable to consent to such treatment within a reasonable time, a licensed health professional may provide treatment when a delay could adversely affect recovery, provided, however, that such treatment must be with the consent of the minor if he is at least 14 years of age. The bill stemmed from complaints by juvenile court judges that the existing law, which requires the consent of a juvenile judge in the absence of a parent, often works to the disadvantage of a minor because a local judge is not available.

Confidentiality of Records. MSV Supported. Enacted.

HB-120 (Thomas) provides that a mental health patient who requests that a bill be submitted to a third party payor is deemed to have consented to disclosure of specified information to the third party payor. If the third party payor desires additional information to process the claim, the request must be made by a physician employed by the third party payor. If the additional information is provided, it must be treated as strictly confidential. The bill also

limits the circumstances under which a third party payor may disclose any such information to others.

Home Health Agencies. MSV Supported. Enacted.

HB-159 (Marshall) provides that any person operating a home health agency must be licensed by the Commissioner of Health. Procedures are established for license renewal, revocation, and suspension.

Optometrists' Use of Drugs. MSV Opposed. Vetoed.

HB-205 (Slayton) would have established a state board of seven members, including the Commissioner of Health, two optometrists, a physician appointed by the Board of Medicine, a pharmacist appointed by the Board of Pharmacy, the chairman of the department of ophthalmology at a state medical school. The Board would have had authority to permit optometrists to use diagnostic drugs if they have satisfied special curriculum requirements and passed an examination approved and administered by the Board and responsibility for determining which drugs to be used. The bill also defined the practice of optometry to exclude diagnosis of eye diseases and expressly required referral to a physician when the possibility of an eye disease is detected. A Senate floor amendment was added to prohibit the use of pharmaceutical agents by an optometrist for therapeutic purposes.

Practicing Without a License. MSV Supported. Enacted.

HB-240 (Heilig) increases the penalty for practicing the healing arts without a license from a Class 6 misdemeanor to a Class 1 misdemeanor. Punishment for a Class 1 misdemeanor can include imprisonment for up to one year. The bill also permits the Board of Medicine to suspend the license of a physician who has been convicted of a felony or a crime involving moral turpitude even if an appeal is pending. In exercising this authority, the Board must consider the potential harm to the physician, the interests of the public and the seriousness of the offense. The bill was requested by the Board of Medicine and supported by The Medical Society of Virginia.

Emergency Medical Service. MSV Supported. Enacted.

HB-249 (Hailey), which is much less comprehensive than the original version, establishes a broad-based State Emergency Medical Services Advisory Council that will be responsible for advising the Board of Health on emergency medical services matters, making recommendations concerning a statewide emergency medical services plan, and reviewing applications of regional emergency medical service units for federal and state funds. The Council is to designate regional EMS units with authority to receive and disburse federal and state funds. Each regional unit is to be under the direction of a broad-based regional EMS council and each unit will have responsibility to develop a regional EMS delivery system.

License Revocation/Advertising. MSV Supported. Enacted.

HB-411 (Heilig) was introduced at the request of the Board of Medicine. It provides that revocation of a physician's license in another state may be grounds for denial of a license in Virginia. In response to the recent US Supreme Court decision, the legal restrictions on advertising by physicians were changed to provide that advertising is prohibited if false or misleading or if it contains a claim of superiority. In addition, the Board of Medicine is given authority to promulgate rules restricting advertising.

Mandatory Continuing Education. MSV Opposed. Carried Over.

HB-454 (Stambaugh) would have required the Board of Medicine, in cooperation with The Medical Society of Virginia, to establish minimum continuing education requirements for relicensure.

Sterilization Under 18. MSV Supported. Killed.

HB-456 (Stambaugh) was designed to clarify significant ambiguities in the existing Code provisions concerning the authority to treat a minor when a parent is not available to consent to treatment. The Code provisions relating to physician immunity for sterilizations are unclear. At the request of The Medical Society of Virginia, Delegate Warren Stambaugh from Arlington introduced this legislation to correct the ambiguities. While the bill did not make any significant changes in the substances of the law, sterilization is a volatile subject in the General Assembly, and groups which were opposed to the existing law were able to defeat the legislation on the House floor.

Virginia Tumor Registry. MSV Supported. Enacted.

HB-512 (Baliles) requires the Department of Health to maintain a tumor registry to be developed from abstracts of patients' records made available by hospitals in the Commonwealth. Funding is included in the revised budget. The Medical Society of Virginia requested the introduction of this legislation.

Gross Receipts Tax. MCV Supported. Enacted.

HB-696 (Jones) responded to the scheduled expiration of the moratorium on increases in gross receipts tax rates. With this bill the General Assembly

established ceilings on rates that can be charged by counties, cities and towns. The ceiling for professionals, including physicians, is $.58 per $100 of gross receipts. Any county, city or town that has a higher rate cannot increase the rate and, in the event it should increase the rate for any other trade group, it must apply any additional revenue generated to reduce rates that are above the designated ceilings until such rates are reduced to such ceilings. The bill also provides that beginning in 1984, if any locality realizes an increase in gross receipts revenues over the amount realized for the preceding year, it must make a partial reduction in any gross receipts rates in excess of the designated ceilings. A move to eliminate the gross receipts tax failed primarily because of the reluctance to effect a general tax increase, which would be required if the gross receipts tax was abolished.

Obstetrical Coverage. MCV Supported. Enacted.

HB-757 (Hailey) requires all accident and sickness insurers to make available as an alternative to each group contractor full coverage for obstetrical serivces on the basis of "usual, customary and reasonable" charges for such services determined in the same manner as such charges are determined for other medical services. House Bill 757 was introduced at the request of The Medical Society of Virginia.

Placement for Adoption. MCV Supported. Enacted.

SB-203 (Gartlan), the product of a joint study between sessions, retains the existing law that restricts authority to place a child for adoption to a licensed child-placing agency, a local board of welfare, a child's legal parent or guardian or an agency licensed outside of Virginia. While physicians, attorneys and clergymen are not allowed to place children, the bill provides that the term "placement" does not include counseling a person with respect to the placement of a child for adoption or the procedure to be followed to adopt a child. The bill also provides that any licensed agency may consider the recommendations of physicians, attorneys and clergymen in making placements.

Cost Review Commission. MCV Supported. Enacted.

SB-259 (Brault) creates a Cost Review Commission for health care institutions. All health care institutions (but excluding physicians' offices) are required to file financial reports and charge schedules annually. The Commission is charged with responsibility for conducting a financial analysis of each institution and publishing information regarding hospital costs and charges. Institutions have the option of submitting their financial reports to a voluntary cost review organization approved by the Commission. The legislation does not permit regulation of hospital rates.

Limited Liability. MCV Supported. Enacted.

SB-514 (Buchanan) exempts a physician from liability for emergency services rendered through a communications device except in cases of gross negligence or willful misconduct.

Health Care Cost Study. MCV Supported. Enacted.

SJR-5 (Willey) establishes a commission to study health care costs. The Commission is to make a comprehensive study of the need for regulation of health institution-based services and third party payments and to make recommendations concerning the need for a state rate review program and the cost of health care and health insurance. The Commission is to make an interim report in December 1978 and a final report in December 1979.

Note: A number of bills expected in 1978 were never introduced. The Medical Society of Virginia worked to discourage introduction of any bill legalizing the use of laetrile, and no such legislation was introduced. Similarly, although it was expected, no "death with dignity" legislation was introduced. The Society is on record favoring further limitations on liability insurance costs, but after discussion with a number of legislators, members of the MSV Legislative Committee and Council decided not to pursue the matter during this session.

Medicaid-Funded Abortion: The Evidence, The Imperatives

Nancy M. Welch, MD, *Salem, Virginia*

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RECENTLY I attended the memorial services of an unknown victim of our senseless denial of Medicaid funds for abortion—and wept. I wept not only for her tragic, needless death but also for our insensitivity and pompousness as human beings.

We have the facts to confirm that there is no sound alternative except to continue funding for Medicaid abortions, yet in a flurry of emotional campaigning we refute reason, clamor on our pedestal of audacity, and close the doors to those in need while justifying our actions with the euphemistic phrase "pro-life." Such recourse is fatuous and an utter mockery of mankind.

Let us review, for all its worth, some of the evidence to which we have closed our eyes. As many as 50% of women undergoing abortion have never delivered a living child or have four or more living children. More pregnant women under 15 years of age selected abortion rather than delivery in 1974, the majority of them giving their young age as their reason for selecting abortion. It seems that the young, unmarried woman not ready to begin her family and the older woman who has completed her family are the main candidates for abortion. Additionally, in contrast to what the anti-abortionists would have us believe, national figures indicate that the increase in therapeutic abortions accounts for only one-fifth of the national decline in birth rate in 1974. This infers, therefore, that four-fifths of the national decline in birth rate may be attributable to population choice, contraception, and sterilization rather than the misuse of abortion as a contraceptive means of family planning. This is a direct refutation of the loudly-acclaimed fears and admonitions of those who are anti-abortion.

Another disclaimer relates to the incidence of repeat abortions. A recent study performed in Hawaii over a four-year period determined that, of 18,790 abortions performed on 17,154 women, 15,689 women had one abortion, 1315 women had two, 142 had three, and only 18 had more than three abortions. This low repeat rate does not conform with advisements that any woman who had a first abortion will continue to avoid pregnancy via subsequent abortions.

We must also be aware of some proven maternal-fetal indications for therapeutic abortions. Maternal mortality due to congenital heart disease is low, but perinatal mortality is significant at 19%. Offspring of patients with congenital heart disease have up to 40% incidence of congenital anomalies, while women with Eisenmenger's syndrome (severe pulmonary hypertension) are faced with a 40% maternal mortality rate. Perinatal mortality rates of 23% have been re-

Presented at the public hearing on Virginia's Medical Assistance Program, Roanoke, Virginia, November 15, 1977.

Address the author at the Roanoke County-Salem Health Department, 510 South College Avenue, Salem VA 24153.

ported with maternal diastolic blood pressures greater than 110 and 41% with superimposed preeclampsia. A maternal age of 45 years or more predisposes the fetus to a risk of chromosome abnormality in one in 24 pregnancies. Sex-linked genetic disorders (hemophilia, Duchenne muscular dystrophy, G-6-PD deficiency) expose male progeny to a 50% risk of inheriting the disease. A family with one child with a neural tube defect (anencephaly, meningomyelocele) can anticipate a recurrence rate of one in 20 for the unborn sibling. A pregnant woman exposed to rubella has a 10-20% risk of the occurrence of fetal damage.

Most, if not all, of these abnomalities are detectable early in pregnancy with the use of amniocentesis and a good obstetrical examination. If the potential for maternal or fetal harm is noted, counseling is undertaken; but this counseling is to no avail if a large sector of our population is denied the only solvable recourse, that of abortion.

Another significant component relates to abortion-induced maternal mortality or sequelae. Prior to its legalization, the maternal mortality contributable to abortions in California alone was estimated at 37 per 100,000 abortions with no effort at determination of morbidity. In 1974 the national death-to-case ratio for legal abortion was 3.1 per 100,000 abortions. Although 12% of the patients experienced one or more complications, less than 1% of these were considered major. Petitti and Cates have projected that, if Medicaid funds for abortions are rescinded, we may expect up to 16 times the number of maternal deaths from pregnancy and illegal abortions. In another study utilizing the Minnesota Multiphasic Personality Inventory prior to and six months following abortion, the investigators concluded that women undergoing abortion had an overall decrease in suicidal ideation, anorexia, loss in libido, hysteria, depression, and paranoia. Indeed, it is a fact that for a healthy woman, her risk of dying is far greater if the pregnancy is carried to term than if gestation is aborted.

It is imperative that we also consider some of the socioeconomic implications involved in the abortion issue. Socioeconomic factors constitute approximately 80% of the reasons for a person choosing abortion. Low income, poor housing, and overcrowding all affect both physical and mental status and, therefore, must influence a woman's thoughts about a new child and its right to love and support. Studies comparing adolescent deliverers and aborters consistently show that deliverers perform less well in school, have higher school dropout rates and fewer career goals, and come from poorer families.

And what about the child? Recently, the anti-abortionists have launched a so-called "birthday campaign" whereby cute pictures of little children are mailed with text something like this, "I would be celebrating my second birthday today but I was aborted." Let me assure you there are just as many real-life scenarios for the counter side. For instance, a child with extensive bruises and two long leg casts: "I'm celebrating my second birthday in the hospital because daddy beat me up again"; an adolescent from behind bars: "If you're not wanted, the best way to get attention is to break the law, only this time I killed someone"; a father with his five children: "We couldn't afford another child but we also didn't have the money for a legal abortion; now my wife is dead"; a child with multiple congenital deformities confined to a state institution: "They knew I would be this way but they didn't have the money to keep me from being born." This parade of avoidable and, therefore, inexcusable, tragedy could continue ad infinitum. Abortion can and does have a very real effect on reducing these devastations. Six months after initiation of a liberalized law, New York City observed a 56% decrease in child abandonment. Under liberal abortion laws the children of this nation face a one-in-33 risk of child abuse or neglect; and, as if that isn't enough, we are willing to subject more innocent children to this terror by forcing unwanted children to be born.

As a reminder, let me reiterate some of the Virginia economic considerations related to Medicaid abortions. The cost of about 4,000 Medicaid abortions in the last fiscal year was approximately $425,760, which represented less than .02 of 1% of the entire State Medicaid budget. Yet the Virginia Zero Population Growth index indicated that the Medicaid abortions performed in Virginia between April, 1975, and March, 1976, saved taxpayers $7.7 million dollars; that means that those who oppose Medicaid abortion in Virginia are asking us to spend 18 times the existing amount of tax money in order to assure more maternal deaths, more child abuse, more unwanted children, more adolescent school dropouts, the birth of more deformed children and more distraught families due to the socioeconomic and emotional perils of undersired prodigy.

Is that pro-life? It appears to me that it is merely pro-breath but anti-life. In the interest of preserving family integrity and individual dignity I hope that the policymakers of this state and our nation possess the wisdom and sensitivity not to restrict Medicaid funding for abortions, for such action would be in accord with both fact and reason and would certainly support a basic commitment to the value of the life of a human being.

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Castle Hill Plantation House (1765), Cobham,

Cumberland Gap from Pinnacle Overlook. *Courtesy the National Park*



VIRGINIA MEDICAL

EDITORIAL

A Virginia Physician Found Cumberland Gap

A VIRGINIA PHYSICIAN, Dr. Thomas Walker, is credited as the first American settler to see and chart the spectacular Cumberland Gap in the Allegheny Mountains at the southwestern tip of Virginia. For nearly 150 years the Alleghenies had been a forbidding barrier to the English colonists; but Dr. Walker, commissioned to locate a large land grant, set out from Albermarle County with five companions on March 6, 1750, crossed the Blue Ridge, and on April 13 reached the precipitous face of the Pinnacle. He named the river "Cumberland" in honor of the Duke of Cumberland, son of King George II and Queen Caroline of England; later that name was given also to the gap and the mountain range.

Dr. Walker was a remarkable man. Born in King and Queen County, Virginia, he settled near the western frontier of the state, there to practice as a physician and surgeon and to become extensively involved in land speculation. His political career included service in the House of Burgesses; he was Commissary of Virginia troops in the French and Indian War, and as Indian Commissioner he signed the treaties of Forts Stanwix and Pitt. His plantation home near Charlottesville, Castle Hill, now a beautifully preserved landmark, was a rendezvous for George Washington, Patrick Henry and other notables. In 1757 Dr. Walker attended Colonel Peter Jefferson in his final illness and became one of the guardians of his 14-year-old son, Thomas; Walker remained a close friend of Thomas Jefferson and was closely associated with him during the Revolution.

A picturesque event involving Dr. Walker and Castle Hill occurred in 1781, when the British raided the Charlottesville area in an attempt to capture Jefferson and the Virginia legislature. Tradition holds that Dr. Walker beguiled the enemy with lavish Castle Hill hospitality, including early morning mint juleps, giving Jefferson and the legislators time to escape.

Time and again Dr. Walker went exploring in the wilderness of southwestern Virginia; Virginia historians are greatly indebted to his journal entries. Walkerton, Virginia, on the Mattaponi River, is named for him, and at Bristol a mountain bears his name, with a dramatic new tunnel on Route I-77 called "Big Walker Mountain Tunnel."

Cumberland Gap became the most famous mountain pass in American history, for when Daniel Boone blazed the trail that became the Wilderness Road, the great trans-Allegheny migration poured through to the West. Now its beauty is conserved and nourished by the National Park Service, and tourists crowd Pinnacle Overlook in the summer months, exhilarated by the view over three states—Virginia, Kentucky and Tennessee. So, too, must Dr. Walker have marveled when first he saw this natural wonder, though he could not know the important contribution his discovery had made to his country.

A.G.

LETTERS

Praise for Doctor Brown's Views on Medical Costs

The publication in the January issue of the editorial by Raymond S. Brown, MD, accompanied by excerpts of remarks made at the Health Care Cost Seminar in Richmond, was very informative and certainly gives us something to think about in trying to control the cost of medical and surgical services.

I don't doubt that Doctor Brown's message will receive wide attention and even be quoted in other publications in future years, as many of the Virginia journal's editorials have been in the past. For instance, I have kept a copy of a Letter to the Editor of the *New England Journal of Medicine*,[1] written in 1976 and quoting at length an editorial that appeared in the VIRGINIA MEDICAL MONTHLY of 1942.[2] The Letter is titled "White Coats 34 Years Ago," and it reads in part: "Since it seems to be the fashion to impute greater natural wisdom to previous generations of physicians (who antedated the time when the practice of medicine became a subspecialty of the practice of technology). . . . I thought the readers of the Journal might be interested in hearing what the medical profession 34 years ago wrote about what I think can only be appropriately termed 'The Emperor's White Coat.' " The Letter then quotes this portion of the editorial in the Virginia journal of August, 1942:

> We know very well when the vogue for white was started. When the Nightingale nurses rustled on to the stage with their emphasis on neatness, cleanliness and decorum, when Lister and Pasteur made operating rooms the clean, germ-proof workshops of surgery, when hospitals began to look spick and span and to pride themselves on appearance, washable, sterilizable, white clothes became necessary. Orderlies, nurses, internes and surgeons in the operating room donned white attire. When Lister's ideas finally filtered through to the public, and sanitation became a word the man on the street could understand, white was adopted as the emblem of the germless state. Barbers, butchers, hairdressers, dentists, druggists, even street cleaners, joined the army of white knights laboring to usher in a spotless world.
>
> In hospitals white clothes became the symbol of aseptic medicine. White clothes became a uniform, a part of the hospital's *esprit de corps*. The fledgling physician found to his delight that his white clothes kept him from being confused with his patients' visitors. They achieved for him a certain respect that his youth, unaided, could not command. After two years of serving as a man in white, he usually sheds his white with a feeling of relief. He has outgrown the necessity of having to maintain his position by an external sign. He has come to realize that a physician should try to make his way by what he is and not by what he seems to be or by what other people think he is.
>
> But a strange thing happens. Before he knows it he is back again in white. It he becomes a surgeon he gets so busy that the forgets, or does not have the time, to exchange his operating gown for his plain clothes, and finds himself making his rounds dressed in the same white grown in which he appeared in the operating room. If he becomes a full time professor and is a researcher in the laboratory, he wears again a white coat to protect himself against blood, acids and other noxious substances. When the time comes to make his ward rounds, he, like the surgeon forgets to remove his work coat and discovers by chance the rarified atmosphere he creates, and the white coat becomes a matter of choice. If he becomes the less spectacular general practitioner and visits the hospital, he meets the surgeon and the professor in the corridor and thinks: "These birds with their flock of internes and nurses following in their train look pretty grand in their white coats", and so, not to be outdone by the gentlemen of the scalpel and the gentlemen of the stethoscope, the archangels of the profession, he returns to his little office with a new resolve. He is determined to bring glamor and drama into his quiet regime. He orders a change of white coats and is as punctilious in wearing them when about his business as any butcher, barber or bar tender of his acquaintance.

When my VIRGINIA MEDICAL arrives in the mail, I always try to read it as soon as possible, just to keep up with what is going on in Virginia in regards to medicine, especially the editorials, Letter from the President, and the minutes of the Council.

Leslie M. Bell, MD

126 North Braddock Street
Winchester VA 22601

1. Morens DA: White coats 34 years ago. New Eng J Med 294:564-565, 1976
2. Anon: The white coat. Va Med Mon 69:466-467, 1942

Editor's Note: As indicated in the references, the editorial in this journal was not signed. The Editor at that time was the late Wyndham B. Blanton, MD, Richmond.

VIRGINIA MEDICAL OBITUARY

Memoir Of Carrington Williams, Sr. 1889-1978

By William W. Martin, MD, Carolyn M. McCue, MD, and Hunter H. McGuire, Jr., MD

Dr. Carrington Williams, Sr., President of the Richmond Academy of Medicine in 1933 and for 50 years a leader in American surgery, died on January 4, 1978.

Dr. Williams was born in Richmond in 1889 and graduated in 1913 from the University of Virginia, where he was elected to Phi Beta Kappa and Alpha Omega Alpha. From the very beginning his radiant love of all people won great popularity and destined him to a lifetime of professional and community leadership.

He trained in surgery in New York City, was married in 1916 to Fanny Braxton Miller, and in World War I served in France with Richmond's Base Hospital 45. After the war Dr. Williams returned to teach at the Medical College of Virginia and to practice at the McGuire Clinic. In 1939 he moved his large and excellent practice to Stuart Circle Hospital, where he operated until 1967 and where his sons have ably succeeded him.

Dr. Williams was nationally known for his expertise in abdominal and thyroid surgery as author of many scientific publications including five chapters in the classic textbook, *Operative Surgery*, edited by Drs. Horsley and Bigger. Dr. Williams was locally known not only for his skill and wisdom but also for the total recall and love of every patient he had ever seen. During 50 years of very busy practice his leadership was recognized by election to the presidencies of the Richmond Academy of Medicine, The Medical Society of Virginia, the Eastern Surgical Society, and the Southern Surgical Association. He was chairman of the Richmond Chapter of the American Red Cross, a director of the Bank of Virginia, a vestryman of St. Paul's Church, and, at age 87, president of the Residents Council of Westminster-Canterbury House.

The extraordinary grace and warmth with which Dr. Williams led our profession is especially remarkable for the adversities which he mastered. The first 20 years of his practice were a meagerly paid apprenticeship which few young physicians today would have the patience or generosity to abide. In 1942 he organized Richmond physicians who served in the Second 45th Army Hospital, but failed to pass the physical examination required to serve abroad. In 1944 his second son, Mason, was killed in an air raid over Germany. In 1970 he lost his first wife, Fanny, who was a favorite personality in Richmond and with surgeons throughout the country. His second wife, Nell, died in 1972. In 1976 he was married to Mildred Farrar Scott, who shared his generous leadership of residents of Westminster-Canterbury House.

From 1955 to 1957 Dr. Williams served as interim chairman of MCV's Department of Surgery. He declined the salary offered by the dean, asking instead that the money be spent for operating his department. At that time all medical schools were replacing volunteer clinical teachers with full-time investigators. Nowhere was the transition more abrupt or charged with resentment than in Richmond, and no one could have been more sincerely distressed by the loss of mutual affection than Dr. Williams. Nevertheless, this great patrician with unique dignity refrained from public combat and quietly permitted the necessary evolution. Subsequent restoration of friendship between MCV and Richmond was possible in large measure through Dr. Williams' careful leadership.

Through his long and generous life Dr. Carrington Williams, Sr., blessed our profession with noble leadership, his patients with love and consummate skill and all who met him with radiant friendship.

Prepared and published at the request of the Richmond Academy of Medicine.

WHO'S WHO

Dr. **Richard L. Fields;** *Fairfax,* has assumed the presidency of the Fairfax County Medical Society. Dr. Fields is a leader in MSV activities, too; he is currently chairman of the new Vanguard Committee and Vice Speaker of the House of Delegates.

No sooner was his term as president of the Fairfax County Medical Society coming to a close than Dr. **Eugene O. S. Stevenson,** *Arlington,* was elected president of the Northern Virginia Academy of Surgery. Other new Academy officers are **William E. Roll, Jr.,** MD, vice-president; **George A. Whipple,** MD, Secretary, and **Merrill S. Climo,** MD, treasurer.

More than 60 third-year students at the Medical College of Virginia have rotated through the teaching program in community pediatrics at the Petersburg Health Department. Each week two students are taught in the Department's pediatric clinics. The program was begun in 1977 by the late Dr. **Robert P. Ostergard** and Dr. Shirhari Sakhadeo.

Planters, Plantations and Places in Old New Kent County, Virginia, is the title of a two-volume work written by Dr. **Malcolm Hart Harris,** *West Point,* who also has published the volumes in a limited edition. There are 999 pages in all, with 150 photographs of houses, churches, and other historic sites, the whole adding importantly to the distinctive heritage of the Tidewater area. "I've been researching this book for 55 years and I'm not through yet," Dr. Harris is quoted as saying in the Newport News *Daily Press.* Dr. Harris also has written many articles for historical magazines and medical journals, including a history of Louisa County, where he was born in 1896.

Dr. **Charles R. Riley** is the new president of the Richmond Surgical and Gynecological Society. Serving with him are Dr. **Wyatt Beasley,** vice-president, and Dr. **Robert P. Singer,** secretary-treasurer.

Dr. **Juan Murillo Montero, II,** *Chesapeake,* has been elected a fellow of the International College of Surgeons.

And in *Lexington,* notice of new standings in their specialties arrived for Dr. **G. Douglas Larsen,** elected a fellow of the American College of Obstetrics and Gynecology, and Dr. **James R. Busch,** made a diplomate of the American Board of Pediatrics.

Four University of Virginia heart specialists presented papers at the 50th Scientific Sessions of the American Heart Association in Miami Beach recently: Dr. **George A. Beller,** the University's chief of cardiology; Dr. **E. Darracott Vaughan, Jr.,** associate professor of urology; Dr. **Robert M. Carey,** associate professor of internal medicine; and Dr. **Carlos Ayers,** professor of internal medicine.

The Johnston Memorial Hospital, *Abingdon,* has elected Dr. **James L. Gardner** as chief of staff. And in *Staunton,* Dr. **H. Lynn Moore** has been chosen president of the medical staff of King's Daughters Hospital.

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The physicians affably gathered in this photograph comprise the Committee on Arrangements for the Annual Meeting 1978 in Williamsburg, November 2 to 5. All are members of the Williamsburg-James City County Medical Society, of which Dr. **Keith E. Hanger** is president. In the foreground, perched on the table, is Dr. **J. Nelson Hall**. Standing behind him are, left to right, Dr. **George J. Chohany**; Dr. **Hugh G. Stokes, Jr.**, who is the Committee's chairman; Dr. **George J. Oliver, Jr.**; Dr. **Baxter I. Bell, Jr.**; and Dr. **Robert E. DeBord**.

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"Fat Must Come Off Without Sacrificing Meat and Bones"

"Virginians of all ages, of all income levels, and of all regions of the Commonwealth are, by and large, pleased with the medical care they receive. Overall, they have a high level of confidence in their ability to secure good medical care for themselves and their families. Even in the rural areas of the state, such as the Southwest, where the need for more physicians and facilities is felt to be great, the level of confidence in the system remains high."

THIS is one encouraging message coming from a statewide public opinion survey done by the Vanguard Committee on behalf of members of The Medical Society of Virginia.

As you may know, Vanguard was formed last winter in response to a very clear need for physicians to become more aware and involved in health planning and related issues. Recently the Committee commissioned a professional survey of Virginians living in each of the five Health Systems Agency areas (HSA's). The in-depth telephone interviews were done for several reasons. First, so that we would gain a clearer, more complete understanding of how our medical care system is seen by those it serves. Second, to identify the areas the public feels need either change or more attention. Third, to give us sound information and guidance in the current debates in planning, tighter government regulations, or cost containment, or some of the other areas where sweeping changes are being proposed. And, fourth, to serve as a benchmark. If change occurs, we'll have a base

against which the impact of future developments on Virginians can be measured.

Among the many important findings was the fact that the people of our state who had reason to seek medical care recently had much greater confidence in the system than the general population. There also was little evidence that they support major cutbacks in hospitals, services or manpower. And, there was relatively little support for national health insurance.

However, the study also made it clear that the public's expectation of its doctors goes beyond providing them with quality care. Virginians said they expect personal involvement and leadership from us in several areas.

One is planning.

The survey pointed out that a solid majority feel physicians, other health professionals and local citizens groups, and not the federal or state levels of bureaucrats and politicians, should control planning. This, by the way, has been one of the primary goals of Vanguard—local planning with significant input from physicians.

Another area in which people are looking to us for leadership is costs of medical care. Nearly three of four Virginians believe that today's costs for health care are too high, even when inflation and the price of modern technological advances are taken into consideration. In short, the public is looking to us for help in developing more cost effective care in our offices and in our hospitals where they are sent for care. According to the survey, Virginians feel physicians have more of an impact on today's health care costs than any other group—more than insurance companies, the economy, federal government programs, or hospital boards or personnel.

Whether or not we agree with the public's perception, we do, directly or indirectly, cause the bulk of health dollars to be spent. But, more importantly,

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the fact is the public sees us as major contributors to this serious problem.

Thus, should costs continue to escalate, we can expect our image as a "catalyst" to grow stronger. And the cries for greater government control will grow louder. *Unless* we become more active and visibly involved in cost containment efforts, we will have little support.

Committees of the Society have been looking into the possibilities for a more cost-effective delivery system. However, there is a limit to what we as a Society can do. To a great extent, resolution of the cost problems will depend on the actions we take as individuals as private practitioners and members of hospital staffs. We need to continue to look for new ways and eliminate unnecessary barriers—innovation has traditionally been one of our strongest assets. We are also accustomed to continually reexamining our approaches to solving problems and to making new initiatives within the framework of our daily professional lives. Some of the areas on which the greatest impact could be made include utilization of hospitals, laboratory tests and X-rays. For example, it has been estimated that if each patient-care physician in the US could shorten the hospital stay of just one of his patients by a single day, the cost of health care could be reduced by more than $50 million.

Without question, planning and costs are complex problems. They are difficult. Fat must come off without sacrificing meat and bones.

William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

For a unique display piece for your office carrying a message on medical costs for your patients, turn to the centerfold.



PETER FORBES' HOUSE (MID-18TH CENTURY), BUCKINGHAM COUNTY, VIRGINIA, BY M. A. PENNINGTON, M.D.

LETTERS

Deplores a New Blue Shield Policy

The Blue Shield of Virginia Board unanimously voted on February 25, 1978, to put a new reimbursement policy into effect. This policy reimburses directly the participating physician only. It will discontinue payment to the non-participating physician, and will, instead, make direct payment to the patient. Furthermore, it will not honor the assignment of benefits.

The aim of this action is to force participation by physicians under economic threat, even though Blue Shield calls it an "incentive to participate." It is evident that complete or near-complete participation by physicians will be followed by control of the physicians' fees, so-called by Blue Shield as "usual, customary and reasonable." They have hinted that they will bring forth anti-trust suits if medical organizations or physicians try to encourage other physicians to drop participation.

What occurred in the state of Michigan is an excellent illustration for Virginia physicians to heed, particularly those who have recently been induced to become participants. A few years ago the UAW union in Michigan negotiated an agreement whereby Michigan's Blue Shield would pay only the participating physicians. The UAW Plan covered three million people, which virtually forced physicians to participate and led to a Blue Shield control. Last year the Michigan Blue Shield Board passed a reimbursement policy which became effective on January 1, 1978, that included provisions basing their future reimbursement on the volume of services performed the previous year. Under that plan, if physicians could trim the volume of X-rays, surgeries, laboratory tests, and other medical services, they would be rewarded with some of the savings through higher fees the following year. If the volume was increased, however, the physicians would have been penalized with lower reimbursement the following year. This action provoked the Michigan State Medical Society to start a campaign which urged physicians to withdraw participation from Blue Shield. This campaign ceased when an agreement was reached between that Society and the Blues, which curtailed the Blue Shield reimbursement policy. The above was reported in the May 26, 1978, edition of *AMA News*.

At the other end of the spectrum is the example of what occurred in South Carolina. Blue Shield of South Carolina passed a plan in 1972-1973 which was almost identical to the presently proposed plan here in Central Virginia. There the physicians succeeded in effecting a mass resignation from Blue Shield participation and forced the latter to withdraw their plan and agree to honor assignment of benefits. Participation in South Carolina dropped from 60% to 29%.

Finally, the ideal is the accepted practice in the state of Louisiana. There a participating agreement does not exist. The physicians' relationship with Blue Shield is the same as it is with other insurance carriers such as Aetna and Travelers. I feel that The Medical Society of Virginia and its component societies should take a good, hard look at the Louisiana system and try to implement the same system for Virginia. This could be achieved through negotiation with Blue Shield or through lobbying in the General Assembly for laws that will guarantee such a system.

It is imperative that The Medical Society of Virginia assume a leadership role in this issue to regain the confidence of its members and to help preserve the practice of free medicine in our state.

W. A. Atiyeh, MD

3500 Kensington Avenue
Richmond VA 23221

Editors' Note: See the Minutes of Council page 532.

Blood Pressure Program Will Refer NIH Employees

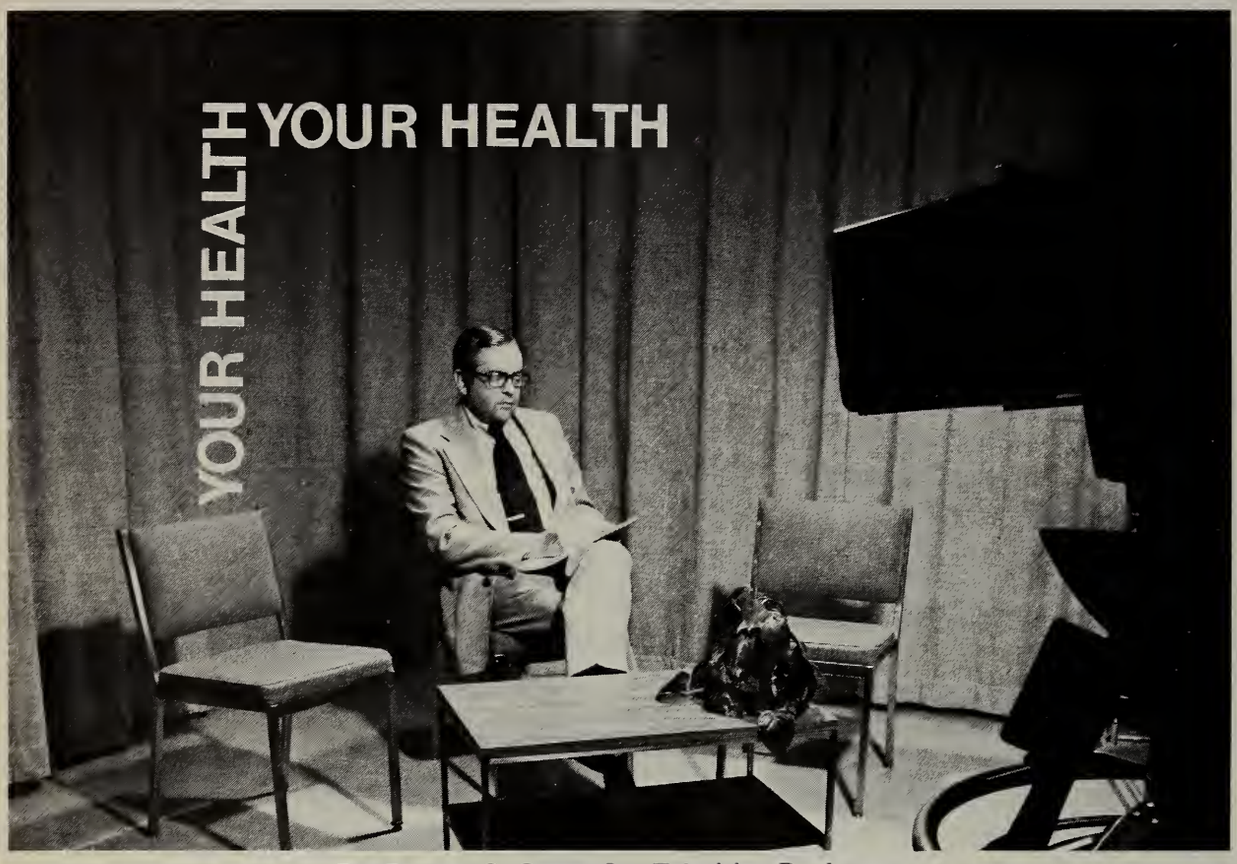
The Occupational Medical Service of the National Institutes of Health initiated in May a high blood pressure control program for NIH employees. The effort will provide intensive detection, followup and counseling services. We estimate that 1800 employees have hypertension, and screenings suggest that only one in eight hypertensive employees has achieved adequate long-term blood pressure control.

We will seek to identify those employees who are unaware they have a blood pressure elevation and refer them to their physician. At the physician's request, we will provide worksite blood pressure monitoring and educational services (e.g. compliance with drug treatment program, diet counseling).

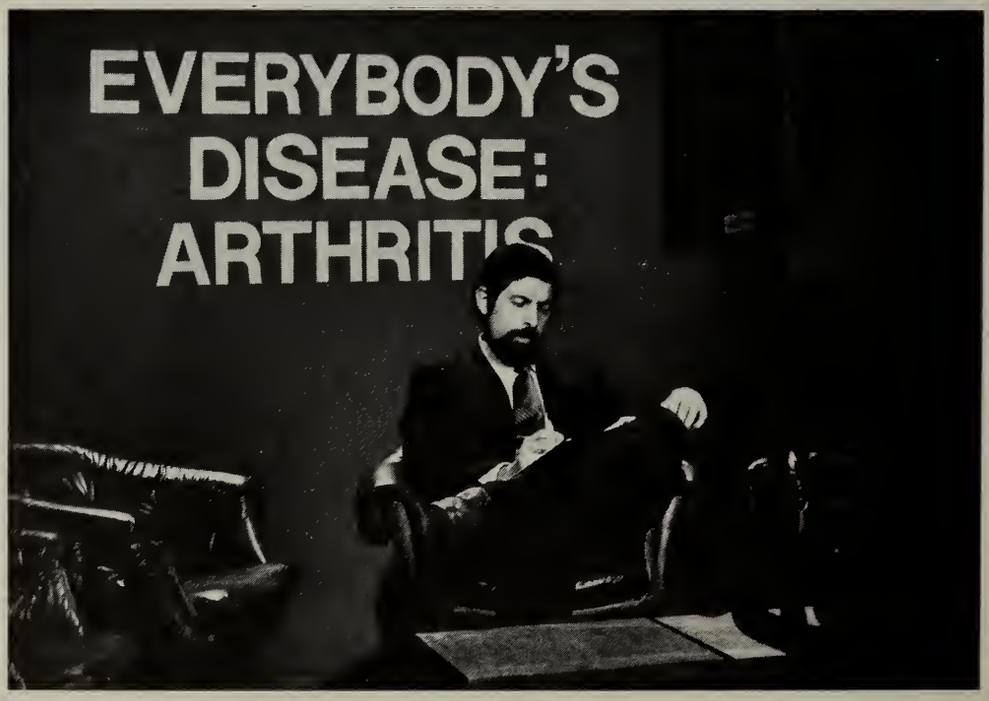
As we identify patients with problems, we will advise their physicians of the blood pressure readings and the services we can provide. If physicians have questions, we will do our best to answer them. This is a cooperative effort, and the help of Virginia physicians will be most appreciated.

Barbara P. Wasserman, MD
Assistant Medical Director, Occupational Medical Service
National Institutes of Health, Bethesda MD 20014

Medicine and Television: Smart, Articulate Doctors, Presented with Gusto



Dr. Duncan S. Owen, Jr., Television Producer.



Dr. Paul G. Rochmis, Television Host.

An increasing number of shows centering on medicine are appearing on TV sets across the nation, and Virginia has its share of them.

Now being broadcast to 52 counties of Central Virginia is "Your Health", a weekly series aired by WCVE-TV, the Public Broadcasting Station in Richmond, with three Virginia physicians appearing on each segment. These are half-hour programs on a question and answer format; they are local extensions of a nationally syndicated half-hour, "MD", which is shown first, the two shows together providing an hour of medical information. The national show originates in Dallas, where Dr. Dan Foster interviews specialists in such topics as diabetes, rheumatoid arthritis, immune disorders, hepatitis, peptic ulcer, obesity, kidney transplants, prostate disease—26 topics in all for the 26 scheduled segments. This national show utilizes charts, drawings, X-rays, and other visual aids; sometimes the specialist interviews a patient in his office, sometimes the camera goes into the operating room.

The companion show broadcast in Richmond relies on the give and take of the three participating physicians and the show's moderator, Carol Hampton, who was borrowed from the Medical College of Virginia's Visual Education Department. The doctors are smart, personable, and articulate, and Miss Hampton has an earnest curiosity; the result is an engrossing and instructive series that astonished the station's programmers by attracting a big following. "It was a 'sleeper'", a station representative observes. "We didn't expect such tremendous interest. When, occasionally, we have pre-empted the time in which a segment was to appear, we've been swamped with phone calls." Physicians like the show, too; many viewers, the station reports, say their doctors have told them to watch the segments relevant to their medical problems.

In sum, it is a distinct success and will be re-run, beginning this fall.

A lion's share of the credit for this commendable program goes to Duncan S. Owen, Jr., MD, professor of medicine at the Medical College of Virginia, associate editor of this journal, and otherwise highly visible on the Richmond medical scene. Had it not been for Dr. Owen, in fact, the local show might never have existed. It was he who raised the $16,000 needed to fund it; the 17 donors who answered his plea include MCV and the Richmond Academy of Medicine, several Richmond hospitals, and a brace of commercial firms. It was he who lined up $3 \times 26 = 78$ physicians to appear on the show, correlating the topics (set by the national show) with Virginia doctors of particular savvy in these topics. And it was he who fought through the myriad other arrangements large and small that attend a production of such scope.

Only a person of Doctor Owen's gusto could have done it.

Another PBS show being broadcast by WCVE-TV in Richmond, is "Cancer Answers". This, too, is a "talk show", filmed in Arizona, with a panel of physicians discussing various elements of this large subject informally with a female moderator.

In Northern Virginia, Paul G. Rochmis, MD, appeared in a sequence of five shows broadcast over the country by the National Broadcasting Corporation as part of its "Knowledge" series. The subject was arthritis, and Dr. Rochmis led panels of doctors, allied professionals, and patients in discussions aimed at clearing up some commonly held misconceptions and exploring early detection, "snake oil cures," and other aspects of this disease.

"MEDIX", the prize-winning television series originated by the Los Angeles County Medical Association, is still going strong, and now there's a new physician-TV star in California in the person of Art Ulene, MD. Dr. Ulene, an ob-gyn specialist, presents "Feeling Fine" segments three times a week in a syndicated program shown in Los Angeles, San Francisco, and Washington, DC; he also has had regular spots on NBC's nationally televised "Today" show. As a result, he is becoming, at 41, "one of the most recognizable faces in American medicine," says a feature story about him in the May 12 issue of the AMA's *American Medical News.*

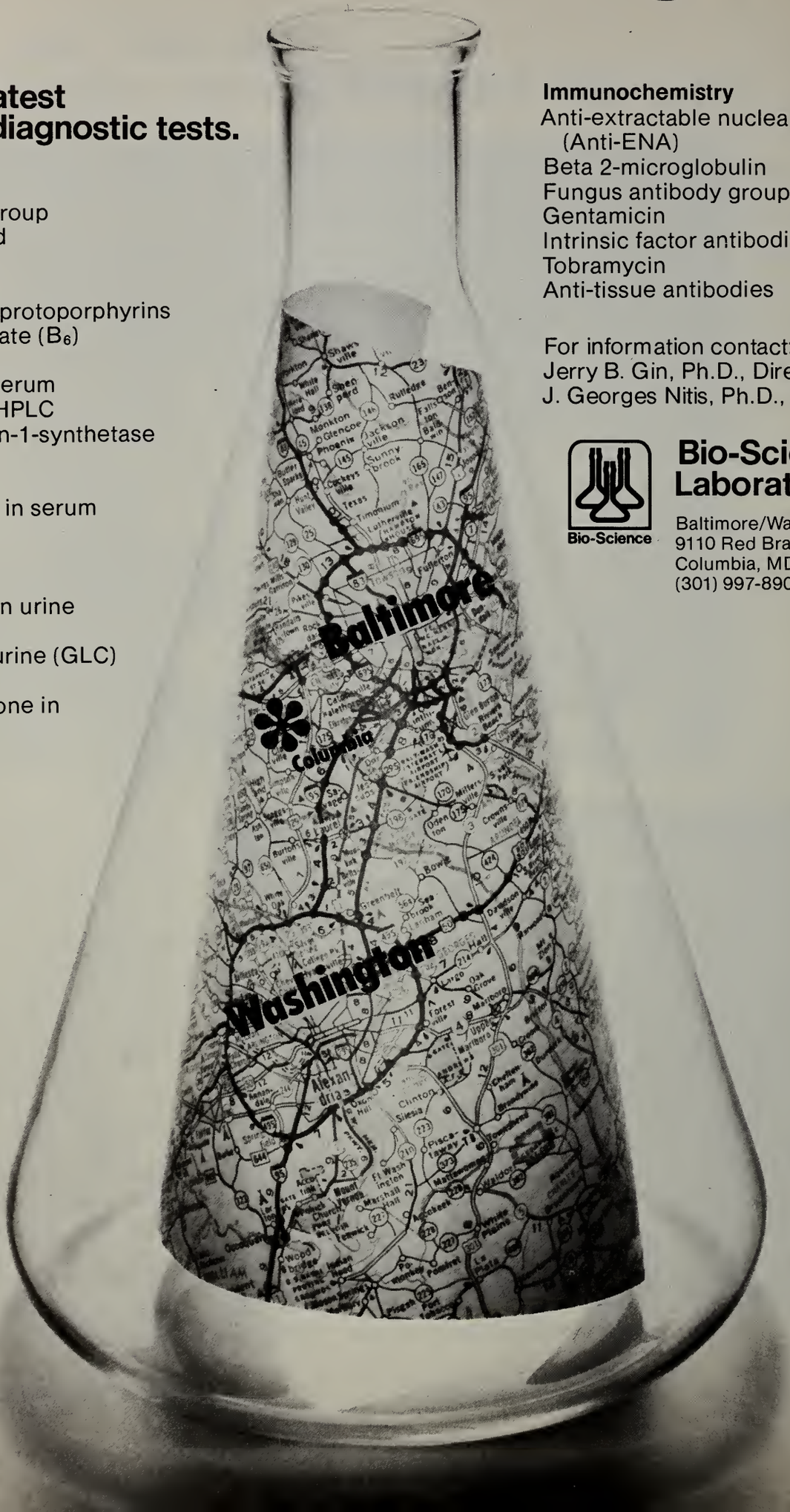
Dr. Ulene believes in the medicine-television alliance. "We can help people," the *News* quotes him as saying. "On a scale of zero to minus ten, with zero being the absence of disease and minus ten being a flat EEG, most people are minus three. They're tired, overweight, anxious, depressed. There's no reason why we can't show people how to be a plus 10." A.G.

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WHO'S WHO IN VIRGINIA MEDICINE

Dr. **George R. Minor,** professor of surgery at the University of Virginia Medical Center, *Charlottesville*, was presented the Virginia Lung Association's Douglas Southall Freeman Award at its recent meeting in Williamsburg. The award, the Association's highest honor, cited Dr. Minor's ability as a surgeon, his medical teaching career, and his service to continuing education for practicing physicians in the treatment of respiratory diseases.

At the same meeting, the Association paid tribute to Dr. **E. Cato Drash**, *North Garden*, professor emeritus of the University of Virginia School of Medicine, for 30 years of service to the Association, and elected Dr. **Donald L. Brummer,** *Richmond*, vice-president.

An *Arlington* physician, Dr. **Charles G. Smith**, has been named "Citizen of the Year" by the Virginia Association of Alcoholism Counselors for his important contributions to their field. Dr. Smith, an internist, initiated and is medical director of the Arlington Hospital's Alcholism Treatment Program, the first such facility in Arlington County. In 1975 he received the Arlington County Medical Society's Welburn Award, presented annually for the greatest contribution to health care in Northern Virginia, for his work in alcoholism.

Dr. **Jay E. Hopkins,** *Lynchburg*, and Dr. **Donald G. Seitz,** *Richmond*, were named fellows of the American Academy of Orthopaedic Surgeons at the Academy's recent annual meeting in Dallas.

Culminating 32 years of military service, Dr. **James E. Chapman**, commander of the 2290th Army Hospital in Rockville, Maryland, was promoted to the rank of brigadier general in recent ceremonies. Brigadier General Chapman is an internist and has a private practice in *Falls Church*, where he also serves on the medical staffs of Arlington, Fairfax, and Northern Virginia Doctors Hospitals.

Dr. **Carl W. Hartman,** *Norfolk*, is chairman of the program faculty for the 14th biennial medical symposium, "Cardiology for the Clinician," to be held September 21-23 at Williamsburg's Hospitality House. The symposium is sponsored by Eastern Virginia Medical School and the Tidewater and Virginia Peninsula Chapters of the American Heart Association.

Dedication to Dr. **Arthur M. Smith, Jr.,** *Charlottesville*, of a new surgical suite at Martha Jefferson Hospital honored Dr. Smith's service to the Hospital from 1932 until his retirement in 1976, the longest tenure in the Hospital's history. In ceremonies conducted by Dr. **Claiborne G. Whitworth**, president of the Hospital's board, and Dr. **A. L. Thiele,** *chief of staff*, an engraved plaque documenting the dedication was placed in the suite.

Dr. **Martin Donelson, Jr.,** *Danville*, is the new president of the Danville-Pittsylvania Academy of Medicine.

A slip of the typewriter placed Dr. **Khalid J. Awan** in Salem, Virginia, in the legend for the photograph on page 352 of the May issue of VIRGINIA MEDICAL, when the truth is that he lives and practices in *Norton*. The Editors greatly regret this error.

The best way to win the heart of a business executive is with topflight, businesslike service. That's why Colonial Auto Leasing has opened a new leasing and service center on Virginia Beach Boulevard across from the Center Theatre. Right in the heart of the downtown Norfolk business district.

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"What are fears but voices airy? Whispering harm where harm is not."

Wordsworth

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VIRGINIA MEDICAL
JULY 1978

General Robert E. Lee: His Medical Profile

Harris D. Riley, Jr., MD, *Oklahoma City, Oklahoma*

"As to precisely what Lee's malady was, these numerous physicians neither agreed nor were positive." The author documents the illnesses that led to Lee's death and interprets them in the light of today's clinical knowledge.

ROBERT E. LEE was dying. Try as they might, his physicians could not escape that conclusion. His pulse had become irregular the previous day; now it was steadily weakening. Gradually worsening, too, was his hurried and exhausted breathing. He lay motionless, except for the rise and fall of his chest. His eyes were closed. Once in a while he talked in delerium, as he had through his illness the past two weeks—"Tell Hill he must come up," he had said emphatically only that morning—but now his words were unintelligible.

It was October 11, 1870, at Washington College (now Washington and Lee University) in Lexington, Virginia. The morning before, his physicians, Drs. Robert Lewis Madison and H. T. Barton of Lexington, felt that Lee had shown some improvement for the first time since his illness had begun 12 days before. In response to Doctor Madison, he had even spoken slowly and distinctly, "I . . . feel . . . better." Their optimism was short-lived. Shortly thereafter and without warning, the patient's pulse became irregular and tachpnea intervened. From that point on his condition slowly but progressively deteriorated. After a severe chill, his condition became so poor that it was necessary for Doctor Barton to warn the family.

In helpless anguish, Doctors Madison and Barton sat by the bed and waited. They had known other waits like this, but none of such piercing sorrow. Mrs. Lee, at the bedside, knew it was the last vigil.

At last, on October 12, daylight came to the sickroom. The other attendants stretched themselves and made ready to give place to those who had had a few hours of rest. On the campus, the students began to appear and groups moved toward the chapel to pray for their beloved president. Faculty and friends came to inquire and to offer their services. But, the physicians gently related, Lee was beyond help.

Finally, at 9:30 that morning, the patient's respirations ceased. Lee was 63 years old. At the end he had said, quite clearly and with poignant appropriateness, "Strike the tent."

His physicians were quoted in the newspapers as saying that the immediate cause of his death was "mental and physical fatigue, inducing venous congestion of the brain which, however, never proceeded as far as apoplexy or paralysis, but gradually caused

Dr. Riley, a native Mississippian, is Distinguished Professor of Pediatrics at the University of Oklahoma. Address correspondence to him at Children's Memorial Hospital, University of Oklahoma Health Sciences Center, Oklahoma City OK 73190.

Submitted 9-22-77.

cerebral exhaustion and death." No autopsy was performed.

When the body was later prepared for burial, the undertaker said there was not a blemish on it.

VIRGINIA would rarely nurture a child as healthy as Robert E. Lee. From infancy in Stratford, Westmoreland County, through boyhood in Alexandria near the Potomac, into young manhood at West Point and beyond, Lee's medical record was, like his body in death, without blemish. At West Point, his excellent health was noted. At the time of his graduation from the Academy, second in the class of 1829, he was 22½ years of age and had reached his full height of 5 feet 10½ inches. His vigor can be documented to an extent by a comparison with his peers. Of Lee's classmates, 17 were to die prior to the War Between the States; of the 323 young men who were at the Academy with him and graduated in the classes of 1826-32 inclusive, 119 died before that war.

Upon graduation from the Academy, Lee was commissioned a brevet second lieutenant of engineers. The 17 years between his graduation and the outbreak of the Mexican War were passed in discharging with energy and distinction the duties of his profession at Forts Pulaski, Monroe, and Hamilton, and as superintending engineer for the St. Louis harbor. In St. Louis, Lee developed a long and warm friendship with Dr. William Beaumont, the famous army surgeon.

Not until he was 40 years old and a captain of engineers did a medical problem enter the record, and then it was more or less of a curiosity. Lee was with Gen. Winfield Scott in Mexico. "Almost paralyzed" by the strain and sleeplessness of preparing for the crucial attack on Chapultepec, Lee kept going, not even stopping to have a slight wound dressed; then, as the lines finally were advancing, he fainted, "for the first and only time in his life." It could have happened to the strongest of men—and Lee's health was, indeed, superb. He is reported at this time to have enjoyed competing with his sons in high jumps, and to have skated, danced, and swum. His vision and his teeth were fine, his hearing unimpaired.

Two years later in 1848, however, when Lee was supervising construction at Fort Carroll in Baltimore



Robert E. Lee died in this house in Lexington, Virginia, on the campus of what was then Washington College and is now Washington and Lee University; the General and his wife moved into it when Lee became president of the College after the War Between the States. Built in 1841-42 and in recent years handsomely restored, it is situated on the school's front campus, which has been designated in entirety a National Historic Landmark. *Courtesy of Washington and Lee University.*

harbor, he developed a febrile illness which was severe and temporarily debilitating. Probably plasmodium vivax malaria, it was the first illness of which there is any record, and it "dogged" him. (Many years later, during the hard summer campaigns of Sharpsburg and Gettysburg, it is reported to have returned to plague him.)

Then, for more than a decade there is no recorded physical disability. But the War Between the States began, and Lee took the military road that would lead to a command of monumental physical and psychological rigor. At the time he cast his lot with the Confederacy, Lee was 54 years of age and weighed slightly less than 170 pounds. He was physically strong and active, capable of sustaining long hours without fatigue. The wounding of Gen. Joseph E. Johnson at the battle of Seven Pines, on May 31, 1862, precipitated Lee into the command of the Army of Northern Virginia. This fortuitous association continued uninterrupted until the end of the war.

Lee was remarkably free of illness and injuries until the Battle of Second Manassas in August, 1862, when he sustained a fracture of a bone in one hand and a bad sprain of the other. Both hands were temporarily immobilized in splints, and despite wild rumors in the North that he had been severely wounded, Lee was again riding his horse one week after the injury.

But in March of 1863 an illness struck that decisively pierced his armor of health. Lee was at Chancellorsville, encamped by the Rappanhannock River. He developed first a severe sore throat, then sharp paroxysms of pain in the chest, back, and arm. The doctors thought the throat infection had "settled" into a pericarditis, or "inflammation of the heart sac". The illness persisted. Lee was moved from headquarters to a home. Dr. Lafayette Guild, medical director of the Army of North Virginia, and Dr. S. M. Bemiss, New Orleans physician and Confederate surgeon, attended him. The pain and malaise left Lee slowly.

Finally, in April, his symptoms moderated to twinges of "rheumatism," but in August of the same year he wrote: "I have not yet recovered from the attack I experienced in the spring." A month later violent pains in his back came on, making it impossible for him to ride his horse, and a few weeks after that he was in such pain that he was confined to his tent. These latter, more severe pains were attributed to lumbago, sciatica, or rheumatism. Lee was 56 years old.

The illness at Chancellorsville was a mortal blow. From that time on, Lee's health was erratic, periods of debilitating pain alternating with times of relative comfort. There was a two-week bout of diarrhea in 1864, during the critical period of the Wilderness campaign, brought on by "bad food and long hours". The food was, no doubt, miserable, and Lee held steadfastly to the long hours characteristic of him; moreover, he was constantly out among the troops, good weather or bad. General Longstreet was shocked when he saw Lee a few months after the attack of diarrhea: Lee "seemed worn by past labor besides suffering at seasons from sciatica, while his work was accumulating and his troubles multiplying to proportions that should employ half a dozen able men." From the Wilderness to Appomattox, Lee's letters register complaints of myalgia and arthralgia, to which he referred on various occasions as sciatica, lumbago and rheumatism.

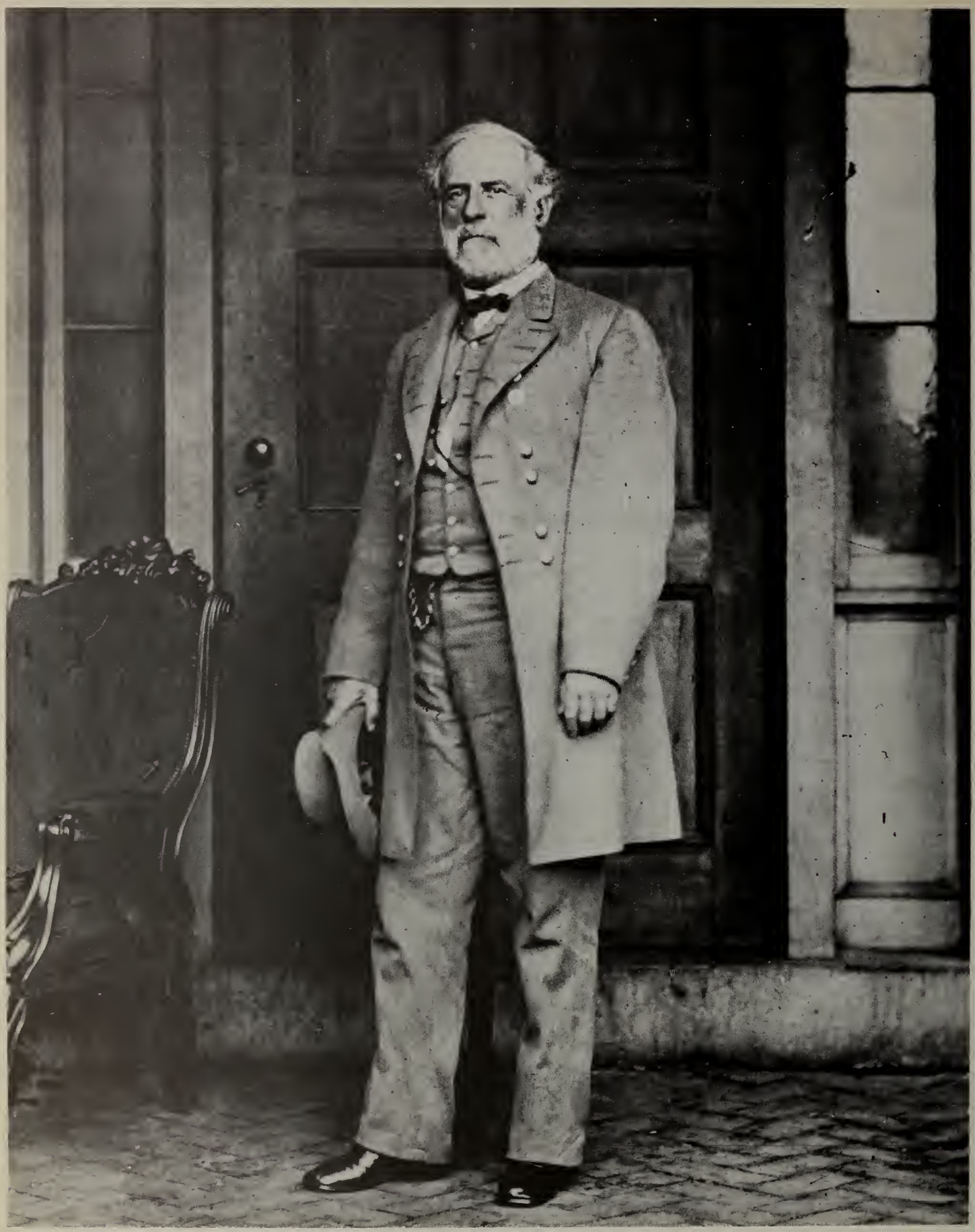
Then came the strain and sorrow of surrender. Photographs of Lee taken after Appomattox show him to have aged swiftly.

LEE'S health was reasonably good, however, when he accepted the presidency of Washington College, although "rheumatism" continued to bother him and he seemed to be increasingly susceptible to respiratory infections. After several heavy and persistent colds, he began to talk of getting old; in June 1869, he seems even to have thought that the strain of attending the College's commencement proceedings might prove fatal to him.

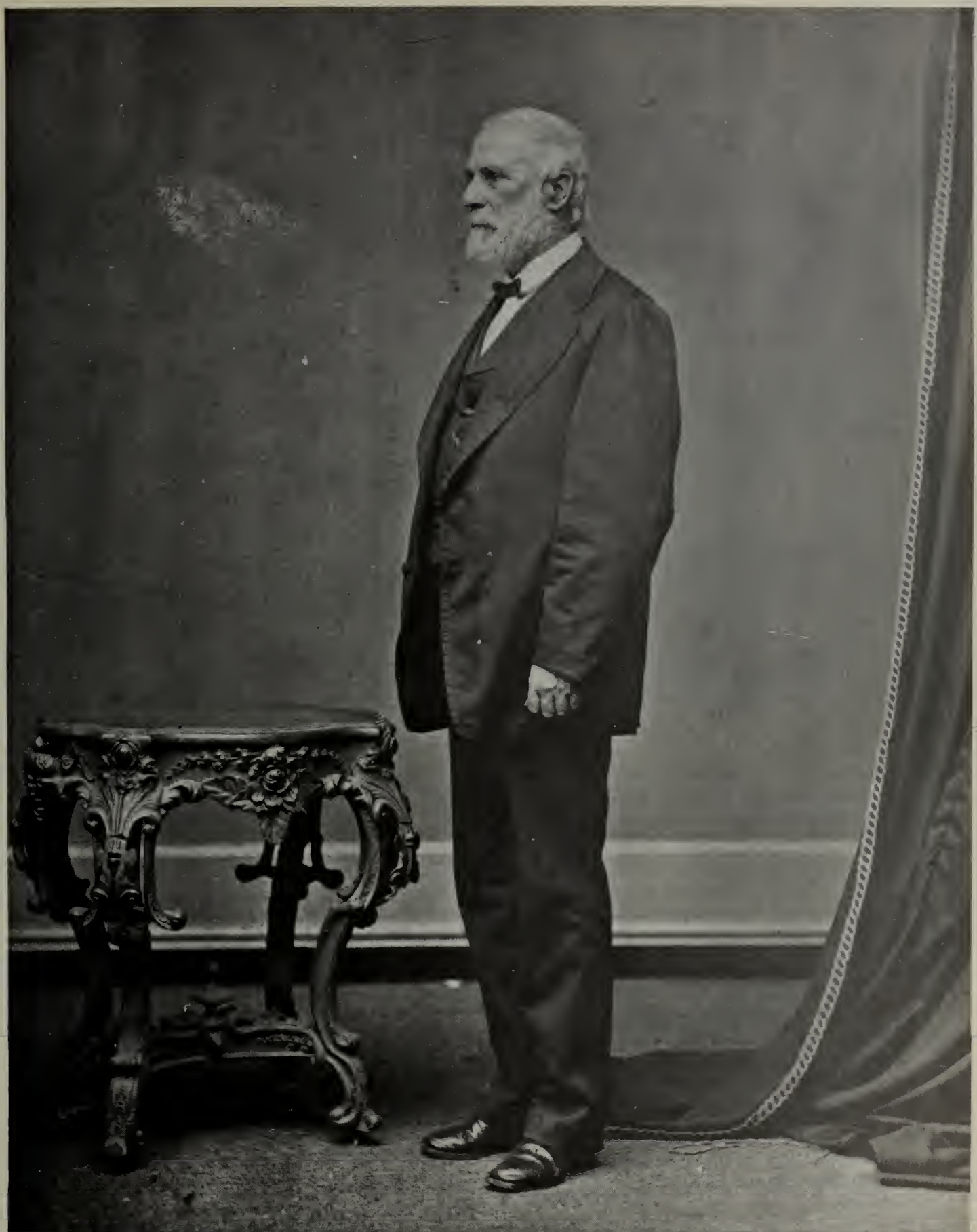
It was one of these severe respiratory infections, in the fall of 1869, that ushered in Lee's final deterioration; as at Chancellorsville, the doctors also diagnosed "inflammation of the heart sac." There was pain of the back, right side, and arms with difficulty in breathing on exertion. He could not walk with comfort beyond 200 yards.

Gradually he improved and strengthened somewhat. Members of the faculty urged him to take a trip, as a rest, and obediently he did so—a six-week tour through the Carolinas, Georgia, and Florida. A rest it was not. Everywhere there were crowds, receptions, dinners; in response to the stress, Lee began experiencing severe "pain along the breastbone." The chest pain became unrelenting and was now present not only after exertion but also at rest. His weight rose, and his complexion, always florid, heightened in color.

Doctors in Richmond, Norfolk, and Savannah examined him. One of them, Dr. M. H. Houston of Richmond, wrote: "The diagnosis is obscure, but the symptoms point to chronic pericarditis." In the summer of 1870, Lee was persuaded to consult Dr. Thomas H. Buckler of Baltimore, making the trip by himself. Of Buckler's advice Lee wrote: "He says he finds my lungs working well, reactions of the heart a little too diffused, but nothing to injure . . . He says I appear to have a rheumatic constitution, must guard



In the spring of 1865, two weeks after Appomattox, Robert E. Lee stood outside the rear door of his home in Richmond and looked into the camera of Matthew Brady. He was 58. Lee was reluctant to be photographed, the story goes, and one may read something like reluctance in his countenance. But his bodily aspect conveys vigor, his physical presence still commands.
Civil War No. 145 in the Brady Collection of the National Archives. Reproduced by permission.



Three years later Lee stood before the camera again, this time in the Lexington, Virginia, studio of Boude and Miley. Here one can see the accumulated physical toll of his illnesses during the War—episodes abraided by long hours in the field, poor food, unceasing strain and struggle. And perhaps one can see, too, in this poignant portrait, the psychological toll of defeat. He was dead in two years, at 63. *Courtesy of the Valentine Museum. Reproduced by permission.*

against colds, keep out in the air, exercise, etc." After this visit, and after the trips to various springs for baths to aid his "rheumatism", Lee intermittently felt a bit better with some diminishment of pain.

As to precisely what Lee's malady was, these numerous physicians neither agreed nor were positive. The diagnosis of simple pericarditis tentatively made in 1870 did not adequately explain his symptoms then and does not satisfy the present day clinician. The illness of 1863 from which his trouble dated may have been acute pericarditis, but to explain adequately his clinical manifestations it must be postulated that it, if present, progressed to chronic adhesive pericarditis.

On the chilly, rainy evening of September 28, 1870, Lee returned to his home from a protracted vestry meeting and went into the dining room, where Mrs. Lee was waiting for him. He took his usual position in front of his chair and opened his lips to say grace, as was his custom—but the familiar words would not come. He slumped back into his seat, trying without success to speak. He was carried to a couch in the living room, and his physicians were called in. They saw at once the seriousness of the attack and ordered a bed brought down from the second floor.

During his illness the next two weeks Lee's consciousness was blurred and he slept much. Dutifully he took the medicine Doctors Madison and Barton administered; they also applied cold dressings to his head and hot applications to his feet, and they cupped him. Now and then the patient seemed to rally, and the doctors' spirits would brighten—but it was always a temporary improvement. At last, defeated, they could only wait for Robert E. Lee to die.

Lee's attending physicians considered the immediate cause of death to be "venous congestion of the brain". Unfortunately an autopsy examination was not performed. On reflection today of what is known about General Lee's health, it would seem likely that he suffered from generalized vascular disease due to atherosclerosis. His initial illness in 1863 was probably myocardial insufficiency due to coronary artery atherosclerosis rather than pericarditis. The manifestations were entirely characteristic of angina pectoris: paroxysmal pains in the chest, arm, and back; difficulty in breathing on exercise (1869); "stricture in his chest" on walking beyond "a slow gait"; and presence of substernal pain ("pain along the breast bone") on any exertion (1870). If the changes shown in his photographs may be accepted as evidence, the progression of the vascular complications was rapid after 1866. Although most of the paroxysmal pain of which he complained was likely cardiac in origin, osteoarthritis of the shoulder joints and upper spine may have contributed to the discomfort.

His terminal illness was likely due to a cerebral thrombosis as a final expression of the arteriosclerotic vascular process. Lee's appearance was frequently described as "florid"; it is likely that the atherosclerosis was also accompanied by hypertension, but Lee lived during the period before methods for measurement of blood pressure had been devised. That he had chronic adhesive pericarditis following his 1863 illness is possible, but its presence is not necessary to explain the clinical picture.

Acknowledgement

The author expresses special appreciation to Mr. Stanley F. Horn, Nashville, Tennessee, for review of the manuscript.

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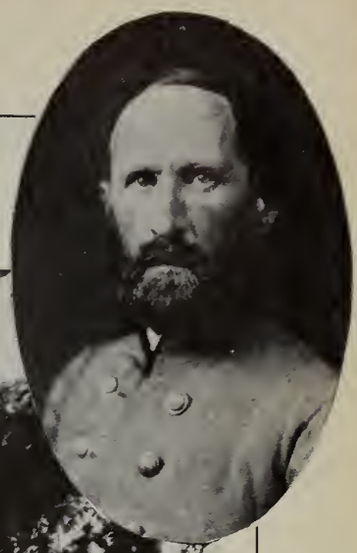
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The House That Doctor Madison Built





Dr. Robert Lewis Madison (oval), one of the physicians who attended Robert E. Lee in his terminal illness, built and lived in the picturesque house in Staunton, Virginia, shown here. Grandnephew of James Madison and professor and surgeon at Virginia Military Institute, Doctor Madison had intended to retire to Staunton, building this house in 1866 for that purpose; but after only a year's residence he sold it and returned to VMI. The buyer was a distinguished Massachusetts educator, Barnas Sears, who came to the South in 1867 to administer the Peabody Educational Fund. He added the tower seen at far right rear and lived in the house until his death in 1880.

The "Sears House," as it came to be called, is described by critics as one of the finest examples in Virginia of 19th century romantic architecture. Old library records at VMI show that Doctor Madison borrowed some books on architecture three years before the house was built; he may have been commissioned to do so by his wife, for a letter owned by a descendant indicates it was Mrs. Madison who designed the house. Certainly the building's exquisite detail and its feeling of intimacy indicate a woman's influence.

The mint condition of the house is a testament to civic action of life-saving proportions. Unoccupied in recent years, the structure had deteriorated badly, its graceful windows smashed by vandals, its once stately rooms a refuge for vagrants. Concerned Staunton citizens formed the Historic Staunton Foundation, solicited and borrowed funds totalling $100,000, and sponsored the meticulous restoration shown here. Work was completed in 1977 and the house placed on the market as a private residence; with the profits of a sale Foundation members hope to move on to other restorations in the area. The house is a Virginia Historic Landmark and is listed in the National Register of Historic Places. A.G.

Sears House photograph by Rick Chittum. Doctor Madison photograph courtesy Virginia Military Institute. Historical data courtesy Jon D. Longaker, Ashland, Virginia, and William T. Frazier, Director, Historic Staunton Foundation.

Coronary Bypass Surgery

Crile Crisler, MD, Robert D. Brickman, MD,
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After examining controversial opinion, the authors document through their own experience and the reports of others the results that may be reasonably expected in various clinical situations following coronary bypass surgery.

IT HAS BECOME fashionable to "choose up sides" regarding the coronary bypass operation, and take a position of either being strongly for bypass surgery or strongly against it. This approach is not in the best interest of the patients, whether their particular physician is "for" or "against" the procedure. Coronary bypass, like any other form of therapy for any other disease, should be evaluated in the light of the most recently available data, recognizing that it is clearly of benefit in certain situations and clearly not of benefit in others. To be simply "for" or "against" coronary bypass is not a rational position.

It is clear, as will be discussed below, that coronary bypass is a highly effective procedure for the relief of angina, and should be considered in the treatment of patients who have not had a satisfactory symptomatic response to medical therapy.

Further, in the area of survival rates it is also established with randomized studies that the survival of patients with symptomatic main left coronary stenosis is markedly prolonged by coronary bypass in comparison to patients in this category who are treated with medication alone. Also insofar as survival is concerned, a lack of adequate randomized studies has created controversy in regard to patients with triple, double and single vessel disease. The details of these controversies and the conclusions which can be derived from them will also be discussed below.

Conversely, coronary bypass is clearly not beneficial for patients with very diffuse coronary disease, and seldom benefits patients without angina who have poor left ventricular contractility and cardiac failure.

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Cardiac Catheterization.

No patient undergoes coronary bypass without prior cardiac catheterization. The risk of this, with coronary angiograms, is quite low in experienced hands. At Norfolk General Hospital there have been two deaths and one myocardial infarction in the catheterization laboratory in the past 3,000 coronary angiograms.

Operative Mortality and Morbidity.

Operative mortality in experienced hands is in the range of 3% or less at most centers, or lower for good risk patients. Table 1 illustrates our own experience with this procedure at Norfolk General Hospital using present techniques. These results are in consecutive patients, including all those undergoing coronary bypass in our personal series from March 1, 1976, through December 31, 1977. There has been one death in 177 patients (0.6%). If coronary bypass plus valve replacement or resection of a ventricular

aneurysm is included in this series, there have been three deaths in 207 patients, a mortality rate of 1.45%. Thus, operative risk is quite low, quite comparable to other major surgical procedures. The rate of perioperative infarction in a consecutive series of 85 patients between March, 1977, and August, 1977, was 8/85 (9.4%). It should be noted that perioperative myocardial infarction is quite different clinically from spontaneous myocardial infarction in that the majority of these patients do not develop arrhythmias, pump failure, or other clinical signs of infarction. Rather, infarction is diagnosed largely on the basis of enzyme changes and the appearance of diagnostic Q waves on the electrocardiogram. The average length of stay per patient from the date of operation through discharge in this series was ten days, and the average amount of blood transfused (including both operation and subsequent hospitalization) was 2 units, 26% of the patients receiving no blood at any time during their hospital stay.

Symptomatic Results.

Nationwide, the results have been fairly uniform. Either complete relief or significant diminution of angina results from coronary bypass in approximately 90% of operated patients.[1,2] Of these, 50-70% generally have complete relief of angina. Comparable results, based on a telephone followup survey of coronary bypass patients done early in the experience at Norfolk General Hospital, are illustrated in Table 2.

Postoperative Treadmill Testing.

Patients undergoing treadmill exercise stress testing, both preoperatively and postoperatively, have been evaluated widely, and the results correlate well with the symptomatic results described above, suggesting that the symptomatic benefit is due to relief of ischemia.[3] Our own experience indicates that, of patients with a positive stress test preoperatively, 64% had a negative test postoperatively, 23% had a positive postoperative stress test but their level of performance was markedly improved, 9% had an inadequate test, and 4% had either an unchanged or worsened treadmill performance. Thus, by this objective measurement, 37% of patients showed improvement following operation. These figures agree quite well with those published in numerous other studies.

Table 1. Coronary Bypass Norfolk General Hospital (Personal Series 3/1/76-12/31/77)

	# cases	deaths
CAB × 1	23	0
CAB × 2	40	0
CAB × 3, 4, 5	114	1
Total	177	1 (0.6%)

Including coronary bypass plus valve replacement or ventricular aneurysm resection 207/3 (1.45%).

Table 2. Telephone Survey Coronary Bypass, NGH 1971-1976

# Patients contacted 210/253	
Post-op angina/chest pain	
None	110/210 (52%)
Improved	86/210 (41%)
Same	12/210 (6%)
Worse	3/210 (1%)
Total improved:	93%
Pleased with results of bypass operation	
Yes	198/210 (94%)
No	12/210 (6%)

Graft Patency.

Several centers have carried out serial coronary arteriograms on patients shortly after coronary bypass and at intervals thereafter.[4,5] There is an initial fall-off in graft patency, usually within the first three months, with about 85% of saphenous vein grafts remaining patent at the end of one year in most series. After one year, the closure rate is low, being on the order of 2-3% per year, so that approximately 75% of grafts remain patent four or five years after bypass. Since most patients have multiple bypasses, this means that about 90% of patients will have long-term patency of one or more grafts. Causes for graft occlusion include technical problems, progression of intrinsic coronary disease, and intimal hyperplasia within the grafts themselves. This latter problem has been documented to occur, but is fortunately infrequent.

It is important to note that the functional status of patients correlates well with graft patency, that is, a high percentage of patients with all grafts patent will be in New York Heart Association Functional Class I postoperatively, whereas those with all grafts occluded generally have very poor symptomatic results.[6,7] This supports the concept that the symptomatic benefits of the operation usually result from relief of ischemia rather than a random or sham effect.

Randomized Studies.

The randomized Veterans Administration study of chronic stable angina[8] has stimulated much controversy. Criticism has been leveled at the surgical results, particularly with reference to the relatively high surgical mortality,[9] especially since only good-risk categories of patients were included in the study. This contributes to the lack of difference in survival between the medical and surgical groups. Another contributing factor is the low annual medical mortal-

ity, which is about 4% per year in this rather small group of 138 medically treated patients. It should be recognized that this medical mortality figure is considerably lower than that demonstrated in much larger groups of medically treated patients quoted elsewhere in the literature. These large series ordinarily show yearly death rates for medically treated patients with single vessel disease of about 2-4%, double vessel disease 7-8%, and triple vessel disease 10-12%.[10] It has been said that the improved survival of the VA medical group can be explained on the basis of improved medical therapy, specifically more aggressive use of nitrates and the use of propanolol. With this in mind, the computer registry on coronary artery disease at Duke University was contacted,[11] and it was seen that the 3-year survival for patients with two or three vessel disease by life table analysis was approximately 70% (vs. 87% overall in the VA study medical group). The computer compared patients with two or three vessel disease treated at Duke in the modern era (with aggressive use of nitrates and Inderal) to those treated formerly. There has been no change in mortality rates in medically managed patients with two or three vessel disease over the last seven years whether they were deemed surgical candidates or not. Thus, the survival rates in the medical group of patients in the randomized VA study are surprisingly high in view of other data from much larger series of patients in other centers.

The results to date of the national cooperative randomized study on unstable angina were reported in November, 1977.[12] This did not include those with main left coronary lesions, as these patients were all operated upon. Severe angina persisted in 45% of the patients managed medically, vs. only 15% of those managed surgically. There was no difference in survival. However, it was noted that 33% of the patients in the medical group crossed over to the surgical group and were operated upon because of persisting severe angina. This, it was felt by the authors, invalidates this study for purposes of comparing survival in medically vs. surgically treated patients.

At this point, it will be useful to consider certain statements regarding the coronary bypass operation in logical sequence, together with the information to support these statements.

• Coronary bypass effectively relieves angina and its usefulness for this purpose is established.

The results quoted above are the basis for this statement. Furthermore, authorities in the field of cardiology, widely quoted as being "conservative", support this concept. Specifically, Dr. Eugene Braunwald,[13] ". . . there is little dispute that severe angina unresponsive or poorly responsive to medical therapy is an indication for coronary artery bypass grafting . . . ", and Richard Ross,[14] "There is general agreement that symptoms are relieved and the quality of life is improved in 90% of patients after operations . . . Certainly relieving symptoms and improving the quality of life is a very important objective of medicine and there can be no question about the attainment of this objective [by coronary bypass procedures]."

• Survival in patients with symptomatic main left coronary stenosis is improved by coronary bypass, in comparison to patients treated medically.

This has been documented by the prospective randomized Veterans Administration study as reported in 1976,[15] indicating that the 2-year mortality of patients treated with modern aggressive medical therapy (including Inderal and nitrates) was 29% compared to a 7% mortality for patients treated surgically. Indeed, because of these results, this particular group of patients was thereafter dropped from the randomized study and all have subsequently been operated upon, as the Veterans Administration felt it would be inappropriate to continue to randomize these patients in the face of these data. Similar results have been reported elsewhere from non-randomized studies.[16] For example, from Milwaukee,[17] the 4-year survival of patients with symptomatic main left coronary stenosis treated with medical therapy was 29% vs. 75% survival for the surgical group, in spite of the higher operative mortality of this older series. The results should be even more striking now as the operative mortality for treatment of this is considerably less with more modern techniques; our experience with this is summarized in Table 3 and has been reported elsewhere.[18]

Table 3. Left Main Coronary Stenosis

Operated* since August, 1975	29
Perioperative infarction	2
Operative deaths	0

* With intra-aortic balloon support (IABP).

• Coronary arteriosclerosis causes myocardial ischemia, thus causing angina and reduced life expectancy.

The basis for this statement is that the life expectancy of patients with coronary artery disease can clearly be shown to be related to ischemic damage secondary to the extent of the coronary occlusive disease and ventricular function. This has been detailed in an earlier discussion in which survival rates for patients with triple vessel disease in medically

treated groups are seen to be inferior to those with less extensive disease. Likewise, the presence of poor ventricular function due to previous myocardial infarctions can be shown to have an adverse effect on survival.

• Coronary bypass relieves angina by diminishing ischemia (improving myocardial blood supply).

This is supported by several pieces of information. First, there is a high correlation between graft patency and relief of symptoms. Second, there is a high correlation between improved myocardial blood supply, as demonstrated by radionuclide imaging,[19] and relief of symptoms. Third, there is a high correlation between graft patency and disappearance of ischemic changes on exercise stress testing, and fourth, there is documented improved survival in operated patients with symptomatic main left coronary stenosis.

• About 90% of patients will have at least one graft patent long-term (documented above).

Thus, following the logic of these statements, one has to conclude that approximately 90% of patients undergoing coronary bypass will have long-term diminution of ischemia as a result of coronary bypass. This clearly results in improved survival in patients with symptomatic main left coronary disease, and it seems logical to conclude that to a lesser degree, improved survival should be demonstrable in patients with significant two, three and perhaps in certain instances, single vessel disease. Unfortunately, the gathering of statistics in regard to this is difficult because patients cannot be forced to participate in randomized trials.

In summary, it is clear that patients with symptomatic main left coronary disease, and patients with inadequate symptomatic relief from medical management of angina pectoris should be strongly considered for coronary bypass. Regarding the effect of coronary bypass on survival, objective data is not yet available to guide us in the selection of patients with operable single, double and triple vessel coronary disease. Until such data becomes available, application of coronary bypass in patients with lesser symptoms but significant coronary disease will have to continue to be individualized, bearing in mind that coronary bypass can be shown to diminish ischemia long-term in about 90% of patients.

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ADVICE TO AUTHORS

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Axillary-Subclavian Vein Thrombosis as a Complication of Permanent Transvenous Cardiac Pacing

Richard Carter, MD, Shelby C. Dickerson, MD, and Robert Berry, MD, *Roanoke, Virginia*

The authors' review suggests that, although acute occlusions are clinically obvious, there may be under-diagnosis of subtotal and slowly-progressing venous obstructions after pacemaker insertion. Anticoagulants may aid in the management of this problem.

WE PRESENT a patient who experienced axillary-subclavian vein thrombosis due to his transvenous pacemaker lead. This complication of permanent pacemakers is not sufficiently recognized. It may be managed by elevation of the arm and anticoagulants.

Case Report.

A 76-year-old white male was admitted to the hospital with the complaint of swelling of the right arm.

The patient had a history of congestive heart failure, atrial fibrillation, and tachy-bradycardia; a Model 5950 Xytron pacemaker had been installed one year previously, in August, 1976. The pacing lead had been placed through a branch of the right cephalic vein. Since then he had had no problems except occasional local pain, and his congestive heart failure had been well controlled.

For the 2 to 3 weeks prior to admission, he reported gradually increasing pain in his right axilla. Three days prior to admission, after chopping wood, he developed increased pain and swelling of the distal right arm.

On his initial office visit, he was noted to have marked rubor and venous distension of the right arm. There were no pulse deficits, edema, venous cords, or fever. He was treated with elevation, warm soaks, and analgesics.

He returned two days later complaining of decreased range of motion and increased pain. He was admitted at that time to the hospital.

Brief review of systems showed that the patient did not smoke. He had had rare chest pains thought to be anginal in nature and ankle edema but no other symptoms of congestive heart failure. Medicines on admission included digoxin 0.25 mg alternating with 0.375 mg daily. He denied recent use of furosemide 20 mg daily, which he had been taking several months earlier.

Pertinent physical examination showed an alert white male in apparent good health. Vital signs were: Pulse 75, respirations 16, blood pressure 130/80. HEENT was normal except bilateral early lens opacities. Cardiovascular exam showed an indistinct point of maximal impulse in the midclavicular line. The rhythm was slightly irregular with a grade 1/6 systolic ejection murmur at the lower left sternal border that was non-radiating.

Examination of the lungs revealed a few bilateral basilar rales.

Abdomen was negative.

Extremity examination showed venous distension and marked rubor of the entire right arm. There were venous cords that were markedly tender in the right axilla but no definite edema or pulse deficits.

Initial laboratory showed a hemoglobin of 17.2, hematocrit of 49.7, with a white count of 8000 showing 51 polys, 30 lymphs, 10 stabs, 6 monos, 2 eos, and 1 basophil; platelet

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count was 241,000. Electrolytes, prothrombin, and partial thromboplastin time were normal.

Electrocardiogram revealed a ventricular pacemaker, rate of 72 with competition, atrial fibrillation with occasional conducted beats, and infrequent PVC's.

Chest X-ray showed the pacemaker power pack over the right pectoral area. The pacer lead showed no breaks and its tip appeared to be at the right ventricular apex. There was fluid or atelectasis in the right minor fissure and minimal widening of the superior mediastinum (Fig. 1).

On the day of hospital admission the patient was started on intravenous heparin, strict elevation of the arm, and continuous moist heat to the right upper arm. A venogram of the right arm was done on the morning after admission and showed complete occlusion of the axillary and subclavian vein on the right with extensive collateral flow and well-visualized thrombi within two large branches of the basilic vein extending up to the subclavian (Fig. 2).

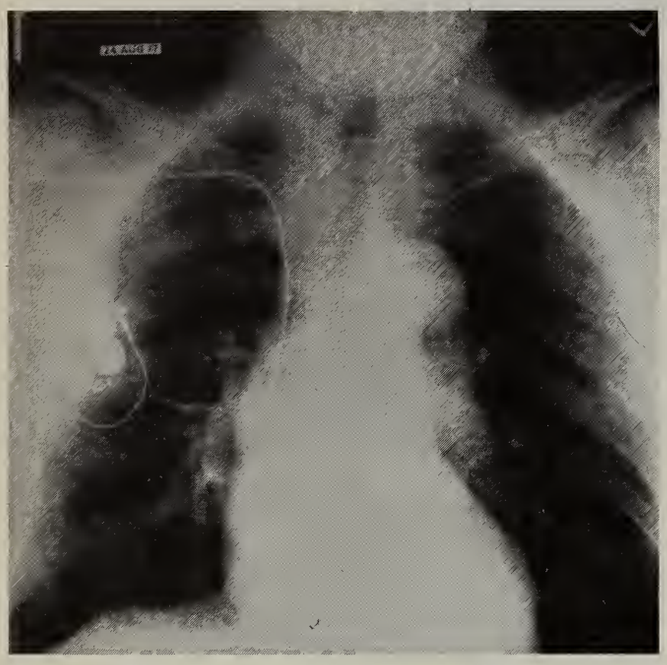


Figure 1. Chest X-ray showing permanent transvenous pacemaker system with power pack over right chest and pacing lead intact.

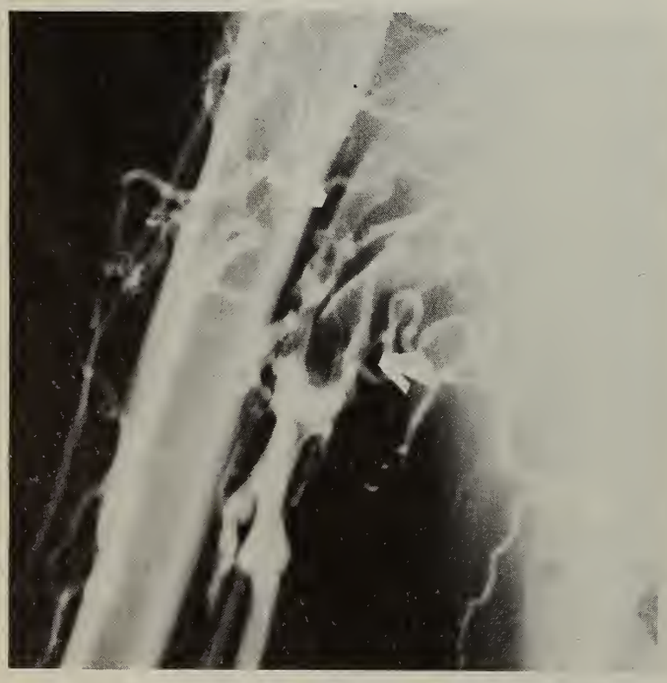


Figure 2. Venogram showing obstruction as filling defects in basilic vein branches (arrows) and extensive collateral venous flow.

Heparin was continued through the fifth day, and the partial thromboplastin times were kept in the therapeutic range. Crystalline sodium warfarin (Coumadin) was started on the second day and controlled with daily prothrombin times. Hydrochlorothiazide 25 mgm per day was also given. He had gradual resolution of his venous distension and tenderness in the right axilla over his nine-day hospital course.

A nuclear venogram was recorded on the seventh hospital day. Technetium-99 labeled human albumen was injected into a vein on the right wrist. Images were made over the right shoulder region and the heart. There was persistent obstruction to the axillary-subclavian veins in the right shoulder and blood reached the heart by way of collateral veins (Fig. 3).

After a nine-day hospital course, the patient had only minimal tenderness, no edema, and no venous distension. At the present time, he is totally asymptomatic, has no positive physical findings, and remains on Coumadin. His chest X-ray is unchanged, except for clearing of the process in the right minor fissure.

Discussion

Transvenous permanent pacemaker leads inserted from a cephalic vein have been associated with subclavian and axillary venous occlusions from 3 months to 5 years following pacemaker placement.[4,8] The presenting symptoms of individual patients have var-



Figure 3. Technetium-99 nuclear venogram extensive collaterals proximal to basilic-axillary vein junction (small arrow). Radionuclide has reached right ventricle (large arrow).

ied from unilateral arm edema to venous engorgement and edema involving the neck, face, and upper extremity. These major venous occlusions occurred in 3 of 125 patients in one report, and one of 78 in another series of patients having transvenous pacemakers.[1,5]

The relatively small cephalic vein used for transvenous lead insertion may act as a blind pocket, from which thrombus could propagate into the subclavian and axillary veins. This mechanism should not be unique to the cephalic vein, but could apply to external or internal jugular veins used for pacemaker insertion, a few of which have also been associated with subclavian vein thrombosis.[6,12]

Prolonged immobility has been associated with lower-extremity venous thrombosis, probably related to venous stasis. Some patients receiving transvenous permanent pacemakers are relatively immobile, but this was not reported for previous cases of subclavian thrombosis. Most patients remain physically active, as our patient, so that immobilization would not usually be an important factor contributing to upper extremity thrombosis.

The presence of a transvenous pacing lead may increase the possibility of subclavian thrombosis. However, spontaneous thrombotic occlusion, Paget-Schroetter's syndrome, has been well described, with over 500 cases reported. Swinton and his colleagues noted that among 23 patients at Walter Reed General Hospital, most were physically active and some associated the onset of upper extremity venous occlusion with strenuous physical activity.[11] None of those patients with spontaneous thrombosis carried transvenous catheters or leads. Some patients who receive pacemakers may have a predisposition to axillary thrombosis, which would be enhanced by the presence of a transvenous catheter.

In addition to subclavian-axillary thrombosis, other thromboembolic complications have been associated with permanent transvenous leads. Thrombus in a right atrium or ventricle, or thrombosis of a coronary sinus, have been reported, and some of those caused pulmonary emboli.[2,7,9] Superior vena cava syndrome occurred in a patient who had an old, residual pacemaker lead in one cephalic vein, and a new lead on the opposite side.[13]

Acute axillary vein obstruction usually is obvious, as in our patient, but the presence of partial or subtotal axillary-subclavian narrowing may not be clinically apparent. Stoney and co-workers performed upper-extremity venography in 32 patients who had had pacemakers for 18 months or more. They found severe or total subclavian obstruction with extensive venous collaterals in 11 patients.[10] It appears that an important fraction of patients from groups with permanent pacemakers have partial or subtotal venous narrowings, although clinically obvious acute occlusions occur in only a few of them.

Anticoagulants are the first line of treatment after acute axillary-subclavian vein thrombosis. Elevation of the extremity and diuretics have been used in some reported cases. Symptomatic acute vein obstructions are an infrequent occurrence, so there are no controlled studies to show that arm swelling resolves faster with anticoagulants than with elevation alone.

Streptokinase infusions have been used in an attempt to lyse acute venous thrombosis related to a pacemaker catheter. These fibrinolytic agents have been of demonstrated value for accelerating the lysis of pulmonary or deep venous thrombi.[3] It is likely that these agents are useful only if detection and treatment of an acute thrombosis are started within five days.[13]

Since there is a possibility of dislodging thrombus from a pacemaker catheter in an obstructed vein, no authors have recommended removal or manipulation of the catheter acutely. If a pacing lead has to be repositioned or removed at a later time, this might be difficult due to scar or organized thrombus around the lead.

Conclusion

Axillary vein thrombosis is an unusual complication of transvenous leads for permanent cardiac pacing. Lead dislodgement or perforation, pacemaker power-pack skin erosion or infection, and failure to pace due to electronic malfunction or excess pacing threshold are more common problems. We report a patient who demonstrated sudden onset of right-arm venous occlusion, confirmed by contrast venography, a year after pacemaker inplantation. Our review of previous reports suggests that although acute occlusions are clinically obvious, there may be under-diagnosis of subtotal and slowly-progressing venous obstructions after pacemaker insertion. Anticoagulants may aid in the management of this problem.

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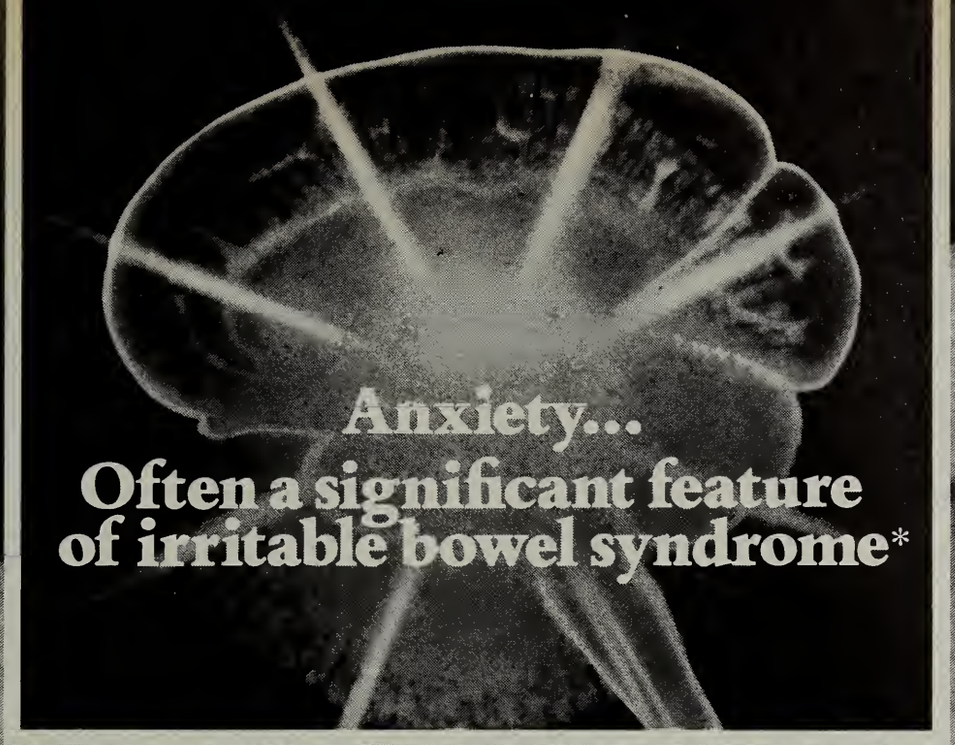
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CANCER TRENDS

Edited by J. Shelton Horsley, III, MD, Gerald Goldstein, MD, and Francis E. Rosato, MD.

Giant Cell Tumor of Bone (Osteoclastoma)

Gwo-Jaw Wang, MD, and Robert E. McLaughlin, MD,
Charlottesville, Virginia

Giant cell tumor of bone usually occurs in the ends of long bones of young adults. The authors discuss therapeutic aspects in the light of recent technical advances.

THE OSTEOCLAST, the "giant cell" from which giant cell tumor of bone has taken its name, was first described by Kolliker[1] over a century ago but the origin, function and nature of this cell remains somewhat of an enigma today. A distinct clinical and pathologic entity which most oncologists regard as "giant cell tumor of bone" was described in 1940 by Jaffe, Porter and Lichtenstein.[2,3] It is this description which most refer to today when discussing this often aggressive and occasionally malignant tumor. The purpose of this paper is to better acquaint the reader with this entity and discuss the therapeutic aspects in the light of recent technical advances.

Clinical Aspects

Age.

Almost all of the patients with giant cell tumors are skeletally mature. The majority are in the second and third decade of life and there is a slight predilication in females.[1-5]

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Sponsored by the Professional Education Committee, Virginia Division, American Cancer Society.

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Incidence.

In most large series, giant cell tumor, benign and malignant, comprises 5-8% of the total of primary bone tumors.[1-5]

Location.

Many tumors of bone, especially the malignant ones, occur in areas of rapid growth at the ends of long bone; thus the metaphyseal area is the usual location. Giant cell tumors are different in that the matured epiphysis is their target. While the bones about the knee, (distal femur and proximal tibia) are the most common sites, the distal radius, an area relatively spared by other tumors, runs a close second.[1-5] As seems to be the case with any malignancy, there are reports of its occurrance in a number of areas in isolated cases.[6]

Symptoms and Signs.

The tumor is likely to be well developed before clinical difficulty occurs. Most patients ultimately complain of dull, aching pain in the involved area. Two-thirds of the patients in one series had swelling and limitation of motion of the adjacent joints.[5]

Rarely, neurological symptoms arise because of local nerve compression. An abrupt change in symptoms in an area previously treated for a benign tumor should of course alert the physician to a possibility of recurrence, pathologic fracture, or malignant transformation. There are no routine clinical laboratory tests which are helpful in making the diagnosis. Usually the serum calcium and phosphorus as well as serum alkaline phosphatase activity is normal. There is some evidence for presence of tumor antigens with detectable serum antibodies, but these are probably non-specific, and testing for these is experimental.[7] Angiography may be helpful for diagnostic purposes and perhaps more importantly to determine the size of the lesion.[8]

X-ray.

Radiographs of the tumor usually show that it involves the epiphyseal end of a long bone, and, while eccentrically located initially, it grows to involve the entire width of the bone. The tumor stimulates the periosteum to lay down a concentric layer of bone at the site of the advancing peripheral margin making it appear as an expanding lesion. The lesion usually extends to the articular plates but rarely penetrates through this surface. The radiolucency of the giant cell tumor is the result of its predominately destructive character and there is no calcific stippling within the tumor mass. Cortical destruction signifies aggression and may herald malignancy.[1-5]

Despite its characteristic location and appearance it must be stressed that for diagnostic purposes biopsy alone is to be relied on, for many destructive processes can mimic this picture.

Pathology.

The presence of giant cells is so common in inflammatory, reparative, metabolic, and neoplastic diseases of bone that their mere presence may serve more to confuse than help in diagnosis. The stromal cells of giant cell tumors also closely resemble those of other lesions. It is thus obvious that an adequate tissue specimen must be submitted to the pathologist as well as all the clinical and radiologic information available if he is to make a correct diagnosis. Needle biopsies are usually inadequate. Often the biopsy is done on tissue which has become necrotic or from an area previously violated by surgery or irradiation, thus distorting the typical gross pathologic picture.

Virgin tumor tissue is usually described as soft, cellular, and friable with a reddish brown color. There is usually a thin shell of bone and periosteum over the area. The tumor extends to, but not through, the articular cartilage.

The histologic characteristics depend on the state and activity of the stromal cells. With this in mind, Jaffe and Lichenstein attempted to grade the giant cell tumor into three grades depending upon the atypism of the stromal cell.[2,3,9] Grade III presented sarcomatous appearance of the stroma and was frankly malignant. Subsequent study has shown that this classification is not uniformally satisfactory in predicting which tumors will recur or even in some instances which are frankly malignant and will eventually metastasize.[4,6]

In general the stromal cells are spindle shaped with an oval or round nuclei. The cell margins may be indistinct and collagen is found intracellularly. The giant cells are indistinguishable from giant cells found in other osseous conditions. They are large (20-60 microns) with up to dozens of nuclei.

As the tumor becomes more aggressive the stromal cells become more crowded and plumper.[2,3] In some cases the stroma is frankly malignant and sarcomatous. Histochemical techniques do not appear to be of value.[1]

The differential diagnosis of this tumor is extremely broad because of the number of lesions that can be found to contain giant cells. If the clinician and pathologist work in concert however, the number of diagnoses can be readily narrowed by correlating the clinical laboratory and radiographic findings with the histologic appearance.

A list of the lesions which commonly contain giant cells follows: Brown tumor (hyperparathyroidism), benign cortical defect, solitary (unicameral) bone cyst, chondroblastoma, pigmented villonodular synovitis, osteoblastoma, chondromyxoid fibroma, fibrous dysplasia, and even fibrosarcoma and osteosarcomas.

Treatment

A number of options are open to the surgeon with regard to treatment of this tumor. As is usually true when this is the case, no one treatment is ideal. Giant cell tumors pose two significant problems to the therapist. The first is the proximity of these tumors to the joint surface, and the second is that it is often difficult to predict the degree of aggressiveness or malignancy of this tumor with any degree of certainty. The dilemma is one of preserving joint function by suboptimally extirpating the tumor versus seriously disrupting a joint surface by more radical surgery than may be necessary. What follows is a synopsis of the methods available. The pros and cons of each varies of course with the location and aggressiveness of the lesion.

Curettage Alone

Although a tempting form of therapy because of its ease for the physician and patient, recurrence rates of

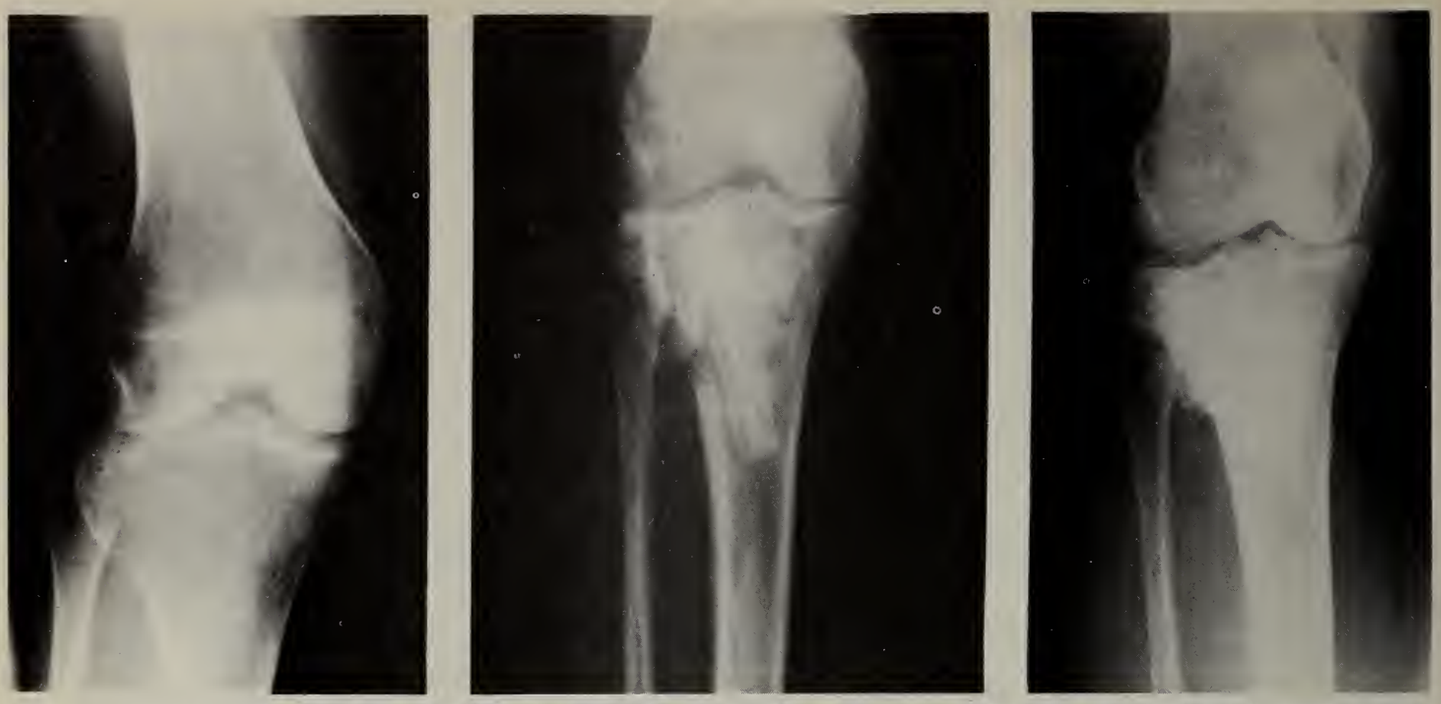


Fig. 1. Preoperative (left), immediate postoperative (center), and 5-year followup (right) X-ray on patient with "aggressive" recurrent giant cell tumor of the proximal tibia. This patient was treated with curettage, instillation of liquid nitrogen, and bone grafting. This procedure was complicated by a wound infection which recurred and was re-biopsied five years later, but there was no evidence of recurrent tumor and the functional result was good.

over 50% in most large series would seem to argue against this mode in all but the smallest of lesions.[4,6]

Curettage and Bone Grafting.

This at first would seem no better than curettage alone, but in fact the recurrence risk (in an admittedly select series) is much less.[6] Perhaps this is because the curettage is done with more care when grafts are to be inserted. Nonetheless, this too should be restricted to smaller lesions where there has not been significant cortical expansion or breakthrough.

Curettage and Cryotherapy.

This is an attractive alternative to the next method (wide resection). Especially designed cryo probes are available or one may simply pour liquid nitrogen into the curetted cavity. By killing all cells in the area adjacent to the cavity no residual tumor is left. This eliminates recurrence. This method is relatively new and associated with a high rate of surgical complications[10] (Fig. 1). A somewhat similar technique has been reported from Sweden in which methyl methacrylate was used to fill the cavity or reconstruct the bone. The effect of the exothermic reaction of the curing cement may exert a similar effect on residual tumor cells.[11] This method should be regarded as experimental since the cases reported are few and the effect of such a large bolus of foreign material in bone has yet to stand the test of time.

Resection.

Formerly when one discussed this method of treatment it was either as a means by itself or combined with bone grafting and joint arthrodesis. Now consideration must be given to the use of allografts, or artificial joint replacement as adjunctive procedures.

Resection alone is usually reserved for tumors located in areas of bone which do not play a major role in a joint articulation, e.g., proximal radius, fibula, distal ulna, and the bones of the hands or feet. Resection and bone grafting have been classically done for lesions in the proximal humerus, distal radius, and fibula, and the femur, and tibial about the knee.[6,12]

The use of allografts, especially cadaver bone which is frozen and treated with glycerine to maintain cartilage viability, shows much promise.[13]

The insertion of man-made materials which are held in place with acrylic cement also is encouraging.[14] It must be remembered however, that this tumor affects relatively young people with otherwise normal life expectancy and the experience with this technique and materials is relatively short.

Amputation.

Certainly this alternative must be given primary consideration in the aggressive, frankly malignant giant cell tumors. Considering the extensive surgery, complications, and rehabilitation involved with any of the methods used with resection, the surgeon and patient may prefer this method in less aggressive cases also.

Irradiation.

Although there is evidence that giant cell tumors are radiosensitive, the recurrence rate after such

treatment is high. Far more important is the fact that the incidence of postirradiation sarcoma is also high.[4,6] Irradiation therefore must be limited to use as a palliative form of therapy in surgically inaccessible areas.

Treatment of Metastases.

The success of lobectomy in the treatment of pulmonary metastases in five of six patients in Goldenberg's series (followup 8-10 years) make this a serious consideration.[6]

Summary

Giant cell tumor of bone (osteoclastoma) is a distinct tumor of bone which usually occurs in the ends of long bones of young adults. The course of this lesion is unpredictable and surgical extirpation with adjunctive reconstructive surgery is the procedure of choice in treating this lesion.

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CANCER TRENDS COMMENT

This article on the giant cell tumor of bone is the fourth in a series on bone tumors by Doctors Wang and McLaughlin to be published in the Cancer Trends department of this journal. Although giant cell tumor of bone is an infrequent tumor, one should be alert to its occurrence. Any change in symptoms in an area previously treated for benign tumor should alert one to the possibility of recurrence, pathologic fracture, or malignant change. Sarcomatous change usually follows previous treatment of the benign process, often with radiation therapy. For this reason radiation is contraindicated in the treatment of benign giant cell tumors. As the authors point out, the course of this lesion is unpredictable, and surgical removal with appropriate reconstructive surgery is the treatment of choice.

J. Shelton Horsley III, MD

Alveolar Cell Carcinoma Presents In a Young Man as Visual Impairment

James A. Long, MD, and Orhan Muren, MD,
Richmond, Virginia

A case report demonstrates that disseminated alveolar cell carcinoma may mimic sarcoidosis in its presentation and that correct diagnosis may be established by fiberoptic bronchoscopy.

THE DIAGNOSTIC ROLE of transbronchial fiberoptic biopsy in diffuse parenchymal disease remains unclear.[1] Recent reports[2,3] have emphasized its usefulness in the workup of suspected sarcoidosis with or without apparent lung involvement. This report documents the diagnosis of alveolar cell carcinoma by fiberoptic bronchoscopy in a patient in whom sarcoidosis was thought almost certain on radiographic and clinical grounds.

Case Report

A 29-year-old black male construction worker was admitted to the Richmond Eye Hospital for evaluation of painless loss of vision in his left eye of three weeks duration. Two weeks prior to the onset of his visual difficulty the patient had been seen in an emergency room and treated with penicillin for presumed pneumonia. At that time he was complaining of fever, chills, pleuritic chest pain, and a cough productive of dark-colored sputum, which cleared rapidly on antibiotics. The patient subsequently denied all symptoms of respiratory disease as he continued to perform his routine daily tasks without difficulty.

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Submitted 12-30-77.

Following exam at the onset of visual symptoms, the patient received a brief course of high-dose steroids for presumed optic neuritis but noted no improvement. He was hospitalized for further evaluation when repeat opthalmoscopic examination revealed mild left conjunctival inflammation, retinal detachment, and an inferior quadrant choroidal mass. Routine admission chest X-ray (Figure 1) revealed extensive bilateral parenchymal disease compatible with diagnosis of sarcoidosis. The possibility of retinal granuloma was raised and a chest consultant was called.

The patient is a lifelong inhabitant of Tidewater Virginia who denied alcohol and tobacco use. Work history included several outdoor construction jobs. There was no known asbestos exposure. For approximately 16 months prior to the present illness he was employed as a subway construction worker in Washington, DC, where he was exposed to various fumes and dust, but at no time did he note respiratory symptoms. Thee was no history of tuberculosis exposure, and the patient took no regular medications. The patient was not exposed to birds or bird droppings.

Physical examination revealed a healthy-appearing muscular young black male in no distress with normal vital signs. Conjunctival inflammation and decreased light reflex of the left eye were noted. Fine late inspiratory dry crackles were heard at both lung bases. There were no skin lesions or adenopathy. Abdominal and rectal examinations were normal and stool was negative for blood. Initial lab work revealed hemoglobin 14.4 gms., WBC 12,300 with 56 polys, 37 lymphs, 5 eos. SMA-12 was normal except for alkaline



Fig. 1. Anteroposterior chest X-ray film taken on day of hospital admission showing bilateral infiltrates.

phosphatase at 209 (normal 30-105); 5TU PPD was negative at 48 hours. Microscopic hematuria was noted on one occasion with 20 to 25 red blood cells per high power field. Arterial blood gases on room air revealed PO_2 63, PCO_2 35, pH 7.45; on 100% O_2, the PO_2 was 510. The vital capacity was 3.11 liters (69% of predicted) and the first-second vital capacity was 2.04 liters. There was no response to inhaled Bronkosol. An IVP was normal. Sputum cytology studies were negative for tumor cells.

Fiberoptic bronchoscopy utilizing the Olympus BF5B2 bronchofiberscope was performed transnasally with supplemental oxygen administered by cannula through the opposite nostril. Granular-appearing, erythematous mucosa was present on either side of the carina extending down both mainstem bronchi. The mucosa of all segmental bronchi was likewise abnormal, but all orifices were patent to the subsegmental level. Blind transbronchial biopsies were obtained from the lateral basal segment of the right lower lobe using the scope tip to tamponade slight bleeding. Bronchial biopsies were obtained from the spur of the right middle lobe and from the right mainstem bronchus. Bronchial brushings of both mainstem bronchi and washings were obtained.

Subsequent tissue exam revealed alveolar cell carcinoma with tumor present in all specimens. No granulomas were seen. Because of these unexpected findings, an open-lung biopsy was performed, which confirmed the results of the bronchoscopy. Etiology of the left retinal lesion remains unproven but is presumed to be tumor.

Discussion

The finding of diffuse parenchymal lung disease in a healthy-appearing young black male presenting with eye complaints clearly suggests the diagnosis of sarcoidosis. The subsequent demonstration of advanced alveolar cell carcinoma is unusual, although reports[4] have confirmed the occurrence in young persons of this relatively uncommon primary lung tumor. Watson[5] found three of 265 patients with "alveolar cell carcinoma" to be less than 30 years of age; of the 265, 17% gave a history of pleurisy or pneumonia prior to diagnosis. Endoscopic bronchial biopsy revealed advanced alveolar cell carcinoma in seven patients. Brain metastases were found in 31 of 43 cases although eye lesions were not specifically noted. Other large series[6,7] have likewise failed to mention eye involvement with this tumor. Metastatic carcinoma from kidney, pancreas, GI tract, and other sites may present with a bronchoalveolar pattern but this was thought unlikely in the present case. Cell type and origin of this tumor is the subject of continuing debate.[4,5]

This case demonstrates that disseminated alveolar cell carcinoma may mimic sarcoidosis in its presentation and that the correct diagnosis may be established by fiberoptic bronchoscopy.

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On the road:
Edgar J. Fisher, Jr. (left),
and Gerald H. Holman, MD

Getting To Virginia's Grass-Roots Health Care

By Daniel H. Gashler



Richmond—7:30 a.m.

Two executives, interested in improving Virginia's health care, departed the commonwealth's capital city on the first of 1977's schedule of visits to rural communities. In the next 10½ hours they would drive more than 250 miles, make six stops and talk with many equally concerned people.

Farmville—8:45 a.m.

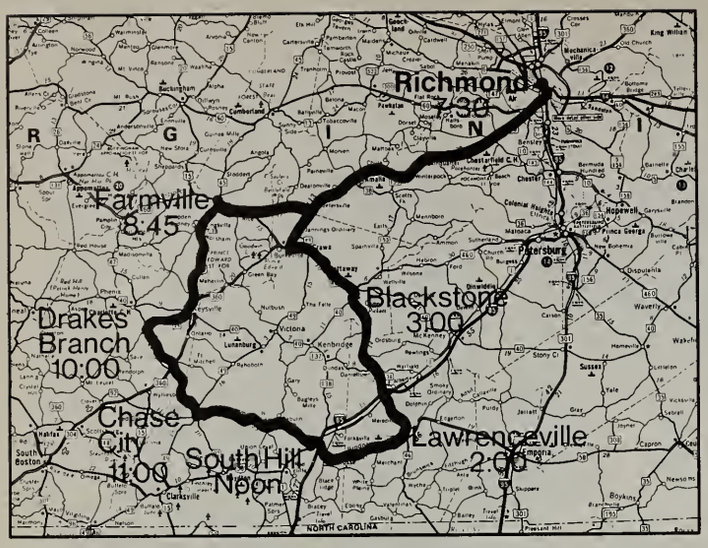
The "addition" to the Southside Community Hospital that day early in April was the excavation, a stack of steel reinforcing rods, wooden footing forms, and two concrete trucks with drivers anxious to pour.

Ray A. Moore, Jr., MD, internist and self-appointed guide, pridefully told about additional beds in the new wing and other services and activities that would be provided. Then he made sure that the visitors saw the hospital's current showpiece, the cardiac intensive care unit, which has been in operation only a short time.

Hospital Administrator J.B. Towler took over at this point and led the group to his office for a cup of coffee and the chance to ask as well as to answer.

And that was what the trip there—and to five other rural Virginia communities—was all about.

Farmville was the day's initial stop on 1977's first "Dean's Tour" provided by Edgar J. Fisher, Jr., who has been director of the Virginia Council on Health and Medical Care, Inc. (VCHMC) since 1948. Ten years ago several medical educators asked him to



The "Dean's Tour" route of Dr. Holman and Mr. Fisher.



In Farmville: Dr. Charles W. Coppedge, left, and Southside Community Hospital Administrator J. B. Towler, center, give Mr. Fisher a building progress report.

arrange trips to small towns throughout the commonwealth, because they were told that the best way to become acquainted with people, problems, facilities and resources was to ride around with him. This he has done. In 1975 and '76 he drove more than 6,000 miles and took these officials to 106 communities.

Gerald H. Holman, MD, dean of Eastern Virginia Medical School (EVMS), and vice-president for academic affairs, Eastern Virginia Medical Authority (EVMA), in Norfolk, was today's guest.

"The purpose of these trips is to acquaint faculty members with the state's health and medical care needs and to get suggestions from community leaders as to how the medical schools might help meet these needs," Fisher explained.

In Towler's office Farmville pharmacist Allen N. Fore and Charles W. Coppedge, MD, joined in the conversation. Since EVMS is a relatively new institution (its charter class of 23 was graduated in 1976), there were questions about the status of the private school that prepares physicians in three years instead of the traditional four.

Fore, who acted as spokesman, pointed out that the Farmville hospital staff organization had funded $20,000 scholarships for three medical students with the understanding that they would return there to practice upon completion of their training.

"One of the best ways to get the boys to come back to the community is to marry local girls," Dr. Holman quipped. In response to a question about female applicants, he said, "Oh yes, we take women too. Overall, they represent 35% of our class. Last year we accepted one who was 32 years old, and the year before we enrolled one who was 28." Present enrollment is 148, and by 1978 there will be 96 in the entering classes. A majority are from Virginia, with nearly half from the Tidewater area.

Although time allotted was much less than the Farmville contingent wanted, the talk included the community's need for more physicians—including a family practitioner, an obstetrician-gynecologist, and a pediatrician.

Upon hearing of these needs, Fisher promptly brought his tape recorder up to his mouth and dictated a memo.

Continuing medical education for the hospital staff, questions about a guaranteed salary as voiced by prospective health providers, malpractice insurance, and par at the local golf course also were discussed.

Drakes Branch—10 a.m.

Charles S. Davis, MD, has been the Drakes Branch physician for about two years. He and his wife, who trained as a pharmacist but who now works as his associate, are both from West Virginia. Although Dr. Davis was attracted here partially because he could get 85% of his medical education loans repaid through a Public Health Service program by serving three years in a Critical Health Manpower Shortage Area, he said that they both like the community and are planning to stay.

"This is a good practice location. I am seeing from 30 to 50 patients a day, and the collection rate is nearly 80%," he commented. "There is an outstanding rescue squad in the county, and in the event of emergencies we have the choice of hospitals in Farmville or South Boston, about 30 miles north or south of here respectively."

He had contacted the county's other two physicians to try to interest them in a cooperative arrangement that might include coverage for one another on weekends or for vacations, and the possibility of getting X-ray equipment that each might share. But he received negative response.



In Drakes Branch: Dr. Charles S. Davis, right, family practitioner who came to the community from West Virginia, shares an anecdote with Dr. Holman.



In Chase City: From left, Dr. Holman, Dr. Earl W. Moore, Mr. Fisher, pharmacist James H. O'Brien, Jr., and Dr. Herman H. Braxton discuss recruitment of a new physician.

The EVMS dean said he was aware of the cost of radiologic equipment, but thought his radiology department chairman might supply information on recently introduced instruments that could be afforded, and he would make sure Dr. Davis was contacted.

The Drakes Branch doctor said that he is considering getting a physician's assistant—at some future time—to help take care of the expanding practice. He also mentioned plans to purchase the building the town now rents to him "at a rather minimal cost," and hopes to renovate it to make space for a larger emergency room.

On the way to the door, Dr. Davis provided a quick tour and pointed out the room in which he had installed a discarded barber chair. "You don't find these in many doctors' offices," he said, "but it's surprising how useful it can be for certain procedures."

Chase City—11 a.m.

The first time Earl W. Moore, MD, was placed in Chase City by the Virginia Council in 1970, he went as a locum tenens for Herman H. Braxton, MD, who wanted to take a long-overdue vacation. Dr. Moore, who was in residency training, returned for locum tenens stints in 1973 and '74, and then finally came to stay in 1975. Although he originally planned to specialize, he admits that he now, as a family practitioner, is in the area of medicine that he enjoys the most.

Dr. Braxton, who began his general practice in 1934, has witnessed and participated in medical discouragements—and progress—in Mecklenburg County in a most interesting period, and he enjoys sharing his recollections.

"Today we have antibiotics to fight infection. But when I first came here if someone got pneumonia it was usually nine days before the crisis passed and we then could expect the patient to live," he recalled. "Typhoid fever was another disease that brings many unhappy memories."

But now Drs. Braxton and Moore practice in a new structure with an abundance of the latest medical equipment, and they are providing care that most patients describe as excellent. The striking colonial building must have been a topic for conversation for many months prior to and during construction and now is an eye-appealing community landmark.

The talk moved from reminiscences to current needs. The sign in front of the medical center still listed the names of three physicians. The third, who had been in the Chase City group practice only a short time, had decided a few days previously to go into solo practice in a town about 60 miles to the northwest.

Even though the others were still actively conversing, Fisher again brought out his recorder and requested that the current list of physicians seeking positions be sent to Dr. Braxton.

Chase City pharmacist James H. O'Brien, Jr., who was at the clinic when Fisher and Dr. Holman arrived, invited them to remain in town long enough to view his recently renovated store. But since he, too, was a long-time friend of Fisher, he realized the tight timetable he always kept, and understood the reason for declining.

South Hill—Noon.

A contingent of seven, headed by Charles H. Crowder, Jr., MD, was in the Holiday Inn lobby waiting to greet Dr. Holman and Fisher and to take them to lunch. In the group was Parke C. Brinkley, who serves as one of the 30 members of the VCHMC board of trustees. There also were several physicians who had made their initial contacts through the VCHMC referral service.



In South Hill: At lunch, Dr. Charles H. Crowder, left, leads a plea for a family practice residency program in the community, while Dr. Holman listens.



In Blackstone: Dr. Holman, left, is briefed on Blackstone Family Practice Center activities by Dr. A. Epes Harris, Jr., center, and Dr. William M. Bruch.

As soon as everyone had ordered, Dr. Crowder made a few introductory remarks, asked another family physician and a pharmacist to provide some history and perspective, and then he, like a seasoned salesman, made the closing pitch.

South Hill's 13 physicians are on the staff of Community Memorial Hospital, which has 120 beds (including 10 in the coronary care unit). The doctors serve residents of three counties year-round and a large number of seasonal vacationers.

The hospital presently has a training program for practical nurses. However, the assembled physicians want to expand the horizon to include a family practice residency program—and since today's guest was the dean of a medical school, it was evident that this was an ideal opportunity to explore the feasibility of such a proposal.

Dr. Holman listened, occasionally interrupted to ask for clarifications, which gave evidence of his interest to assist, and then, after everyone else had contributed his bit, the EVMA vice-president made his response.

He noted that potential for training family practitioners in a locale like South Hill, with its reported excellent medical facilities and the apparently adequate number of patients (last year alone there were some 300 births in Community Memorial Hospital), certainly were worthy factors for consideration. "The leadership, support and enthusiasm exemplified by Dr. Crowder and the group here today, which includes the hospital's board chairman and the community's newest physician, a pediatrician in practice here less than a month, is evidence of your zeal," Dr. Holman commented.

Although the medical school administrator made no promise to create a link between his institutions and South Hill's hospital, he did say the he would discuss the proposal with members of his faculty and staff and would explore and develop the matter if at all feasible.

Blackstone—3 p.m.

Although it is in a community of less than 5,000 residents, the Blackstone Family Practice Center has many similarities with a large urban medical center. More than 12,000 patients made 28,000 visits there in 1976.

The Medical College of Virginia's family practice residency program has a contract with the Blackstone facility, and 16 residents annually are at some point of their training, either at the parent institution in Richmond or at Blackstone.

A. Epes Harris, Jr., MD, director of the center, had been featured in the Ricmond *Times-Dispatch* the Sunday before as a model family practitioner. The article depicted him as a person with the attributes of the old stereotype of a country doctor with black bag who trudged down the dusty roads to the deteriorating shanty bringing comfort to the bedside of the ailing. Yet Dr. Harris also has at his command a 20th century education and a clinic with the equipment and trained personnel to achieve some of the "miracles" that his predecessors dared not even dream about. And, he is teaching the residents, his successors, to carry on the traditions.

Although the Center's ties are with MCV, Dr. Harris and his staff were eager to talk with the Eastern Virginia Medical School dean. And while Dr. Harris guided Dr. Holman through the facility, Fisher sat on a couch in the resident's library and dictated a few memorandums, completely ignoring the young physicians rushing through en route to their next patients, the group huddled around the illuminated X-ray films, the nurses carrying specimens to the laboratory, and the loudspeaker paging a doctor to pick up the telephone. (*Continued on page* 529.)

In his 24 years of practice, both in the United States and in his native Canada, Dr. Holman has been in hundreds of medical facilities, talking with people seeking his assistance—and with those he knew could help him. Yet in Blackstone it was a meeting of two physicians with an immediate rapport, neither as a person-in-need, but only interested in one another's programs, goals, resources and projections, and both aware that in the future either might benefit from today's brief chat.

This was the last stop for the day, and since they had been on the go since 7:30 a.m., Fisher and Dr. Holman were ready to get back on the road for the 65 miles to Richmond. By the end of the day the odometer had advanced more than 250 miles.

Dr. Holman, who had taken a day away from a demanding schedule in Norfolk, still had a 92-mile drive ahead of him.

What had the dean accomplished?

"I believe one of the major benefits of my visiting physicians in Virginia has been to recognize the opportunities for rewarding practices in the commonwealth for our graduates, as well as to get a feeling for how we should shape our curriculum to train young men and women to meet the particular needs that are required for the kind of practice one can envision here," he commented.

Fisher, who had a similar tour to northwestern Virginia scheduled in May, had this to say about today's visit: "Primarily, these excursions are for the deans. However, I feel that I also gain something from each visit—a renewal of friendships in each community, a chance to meet new health care providers, and an opportunity to hear what the grass roots practitioners think aout the current conditions, problems and potential solutions.

"The immediate benefit to the rural physicians is the meeting with the dean, but I believe the effects of the visit are long-lasting—to the doctor, to the community, to the dean, and to the Virginia Council. I consider these trips a most worthwhile investment."

ABOUT THIS ARTICLE

This article originally appeared in the Fall, 1977, issue of *Commitment*, a publication of the US Department of Health, Education and Welfare's Health Resources Administration, and is published here by permission. The author, Daniel H. Gashler, is Editor of *Commitment*.

It is brought to the attention of our readers because The Medical Society of Virginia has for many years strongly supported the work of the Virginia Council on Health and Medical Care.

MSV members are urged to contribute financially to the Council. Its effectiveness benefits all Virginia physicians. The Council's address is PO Box 12363, Central Station, Richmond VA 23241.

The Virginia Council On Health And Medical Care: What Is It?

Organized in 1946, it is a voluntary organization, privately supported (it seeks no funds from tax money), with headquarters in Richmond.

Its board of trustees is comprised of representatives of 30 medically related societies, associations, chapters, or groups, plus a 15-member executive committee and 30 elected board members representing the business leadership from communities throughout the state.

Edgar J. Fisher, Jr., who has been director for 27 years, has a staff of 10 to provide services that include:

- Physician referral. In 1977, more than 1,500 physicians used the service, and 56 placements were made in 36 Virginia communities; over 1,000 doctors have established practices in Virginia through the referral service since 1950.
- Dental, dietitian, and occupational therapy referral.
- Health careers program. Brochures have been prepared on 37 careers, and were sent in response to more than 4,300 requests in 1976; audio-visual presentations were made in 241 schools in 1976, where 44,383 students were exposed to health field opportunities.
- Forums. Regional health forums were held in Lynchburg, Staunton, and Luray; a nutrition forum was held, and the subcommittee on aging of the Council's Nutrition Committee produced a publication, "Nutrition Education for the Elderly," which attracted national attention.
- Conferences. "Breaking Affective Barriers for the Handicapped" was held in Roanoke as part of the series the council has sponsored since 1951.
- Special staff assignments. Council staff members serve on numerous state and national commissions, committees and boards.
- Trips with the deans.

MSV Officers and Councilors, 1977-1978

President	President-Elect	Past President
William J. Hagood, Jr., MD	**Charles E. Davis, MD**	**W. Leonard Weyl, MD**
Clover	*Norfolk*	*Arlington*

Vice-Presidents

First	Second	Third
George M. Nipe, MD	**George E. Broman, MD**	**Edwin L. Kendig, Jr., MD**
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Councilors	District	Vice-Councilors
Harold L. Williams, MD *Newport News*	1st	**William Stewart Burton, MD** *Nassawadox*
Gervas S. Taylor, Jr., MD *Norfolk*	2nd	**Frederick K. McCune, MD** *Virginia Beach*
Charles N. Caravati, Jr., MD *Richmond*	3rd	**J. Latane Ware, MD** *Richmond*
Gordon G. Birdsong, MD *Franklin*	4th	**Charles H. Crowder, Jr., MD** *South Hill*
Girard V. Thompson, Sr., MD *Chatham*	5th	**William R. Watkins, MD** *South Boston*
H. C. Alexander, III, MD *Roanoke*	6th	**James B. Jones, MD** *Lynchburg*
Robert C. Green, Jr., MD *Winchester*	7th	**Harvey D. Smallwood, MD** *Charlottesville*
Harry C. Kuykendall, MD *Alexandria*	8th	**Nicholas G. Colletti, MD** *Woodbridge*
Robert V. Gailliot, MD *Marion*	9th	**James L. Patterson, Jr., MD** *Pulaski*
C. Barrie Cook, MD *Fairfax*	10th	**Gerald J. Fisher, MD** *Alexandria*

Councilors Ex-Officio

State Health Commissioner	Speaker of the House	Editor, VIRGINIA MEDICAL
James B. Kenley, MD	**K. K. Wallace, Jr., MD**	**W. T. Thompson, Jr., MD**
Richmond	*Virginia Beach*	*Richmond*

Vice-Speaker of the House: **Richard L. Fields, MD,** *Fairfax*

AMA Delegates

Delegates		Alternates
Michael A. Puzak, MD *Arlington*	1978-1979	**W. Leonard Weyl, MD** *Arlington*
Carl E. Stark, MD *Wytheville*		**Raymond S. Brown, MD** *Gloucester*
F. Ashton Carmines, MD *Newport News*	1977-1978	**Percy Wootton, MD** *Richmond*
John A. Martin, MD *Roanoke*	1978	**Arthur A. Kirk, MD** *Portsmouth*

The Medical Society of Virginia
PROCEEDINGS

Minutes of the Council

A meeting of the Council of The Medical Society of Virginia was held in Richmond at Society Headquarters on Saturday, May 13, 1978.

Members Present: Dr. William J. Hagood, Jr.; Dr. Charles E. Davis, Jr.; Dr. George M. Nipe; Dr. James B. Kenley, Ex-Officio; Dr. Harold L. Williams; Dr. Gervas S. Taylor, Jr.; Dr. Charles M. Caravati, Jr.; Dr. Girard V. Thompson, Sr.; Dr. H. C. Alexander, III; Dr. Robert C. Green, Jr.; Dr. Harry C. Kuykendall; Dr. Robert V. Gailliot and Dr. C. Barrie Cook.

Others Present: Dr. George M. Broman, 2nd Vice President; Dr. Richard L. Fields, Vice Speaker; Dr. J. Latane Ware, Dr. Charles H. Crowder, Jr.; Dr. William R. Watkins, Dr. James B. Jones, Dr. James L. Patterson, Jr. and Dr. Gerald J. Fisher, Vice-Councilors; Dr. Michael A. Puzak, Dr. Carl E. Stark, Dr. F. Ashton Carmines and Dr. John A. Martin, AMA Delegates; Dr. Percy Wootton and Dr. Arthur A. Kirk, Alternate AMA Delegates; Dr. Gerald H. Holman, Dean, Eastern Virginia Medical School; Dr. James S. Kitterman, President, Norfolk Academy of Medicine; Mrs. William N. Gordge, President, The Medical Society of Virginia Auxiliary; Mr. Robert G. Stuart, Executive Secretary, VaMPAC; Mr. Allen Goolsby, Attorney for the Society; Mr. Edward S. DeBolt.

Presidential Progress Report.

Dr. Hagood reported on his activities since the last Council meeting in February. Of particular interest were his comments on the Negotiations Conference held recently in Scottsdale, Arizona, and the first presentation of a traveling HSA program held in Martinsville. His travels have taken him from southwest Virginia to Maryland with many stops in between.

Vanguard Report.

Dr. Fields, Chairman of the Vanguard Committee, reported that a decision had just been made on the person to serve as the executive secretary of the Committee. The new man will, in all probability, assume his duties some time in June. He stated that excellent back-up assistance was being received from Medical Service Consultants, Inc. and the Edward DeBolt organization. Without their help, it would have been impossible to have reviewed and made recommendations on the various plans proposed by the five regional HSA's. Many of the recommendations have been well received and favorably acted upon by the HSA Boards.

Dr. Fields then called Council's attention to a proposed policy statement by The Medical Society of Virginia on health planning and PL 93-641. The formation of a basic policy on health planning was said to be the first step towards being able to devise consistent positions on issues relating to the National Health Planning and Resources Development Act.

The first issue of the Committee's Newsletter entitled "In the Vanguard" was distributed and found to be most attractive and informative.

Dr. Fields went on to deplore the apathy of many physicians and stressed the importance of active local Vanguard Committees. He stressed the importance of developing effective means of communication and indicated that serious consideration was being given to the development of a motion picture designed to carry the Vanguard message to meetings over the state—large and small. He also suggested that serious consideration be given to making the Vanguard Committee a standing committee in its own right.

There followed considerable discussion during which it was brought out that there might well be a need of part-time staff at the local level if the Com-

mittee's efforts are to realize their fullest potential. There was also some thought that the various reports prepared by Dr. Contis and Mr. DeBolt should be sent all those physicians serving as members of HSA Boards.

Mr. DeBolt mentioned that a slide presentation is now in the production stage and, hopefully, will be available in the not too distant future. It was pointed out that such a presentation is much less expensive than a motion picture and that it might be well to test its effectiveness before proceeding further.

Special Assessment.

Dr. Hagood read several letters received from Society members concerning the assessment—some being critical and some very supportive. It was learned that approximately 2,300 of the 4,960 active dues paying members billed have paid thus far. A second notice will be going out within the next few weeks, along with additional explanatory material. It was agreed that the assessment must be considered as mandatory.

Travel Program—1979.

Dr. Davis reported that a number of fascinating proposals had been received for the Society's 1979 travel program. In reviewing the Society's experience thus far, he pointed out that twelve trips had been sponsored with INTRAV and no major complaints have ever been received. Dr. Davis went on to say that he was convinced that trips of a 9-12 day duration are the most desirable and popular. He called attention to the fact that the 1978 "Rhine Adventure" had been sold out for some time and that approximately 20 members were currently on the waiting list.

It was Dr. Davis's recommendation that the Society sponsor two trips in 1979—a 9-day winter air-sea trip to the West Indies, and a 10-day summer trip to Russia. Both of these trips would be handled by INTRAV. His motion for approval of the two trips was seconded and adopted.

Blue Shield.

Dr. Hagood read a statement having to do with the relationship of The Medical Society of Virginia to Blue Shield of Virginia. The statement called attention to the various investigations of Blue Cross-Blue Shield being carried on at national and state levels and the obvious necessity for the Society to take a very close look at the Society's relationship with Blue Shield. It was learned that the Federal Trade Commission is investigating provider control of Blue Shield Plans throughout the Nation and that Congress is also conducting hearings on the relationship between physicians and Blue Shield. Here at home the General Assembly has established a special commission known as the Commission to Study the Containment of Health Care Costs. This study will, in part, touch on provider control.

The proposed statement expressed strong support for provider control but recognized the necessity for the Blue Shield of Virginia Board to operate independently of state, local and specialty societies. Consequently, the Blue Shield of Virginia Board is being requested to amend its Articles of Incorporation eliminating the requirement that five of the provider board members must be nominees of The Medical Society of Virginia. This would mean that the election of all Blue Shield Directors would be the responsibility of voting members of Blue Shield—namely, participating physicians. The statement went on to say that any grievance a physician has against Blue Shield should be addressed to the Blue Shield Board rather than to a state, local or specialty society.

The proposed statement further expressed the opinion that physicians must constitute a majority of the Blue Shield Board. Participating physicians are urged to take an active role in Blue Shield to insure the continuation of a Plan with significant physician input.

At this point, Dr. Hagood entertained a motion calling for approval of the statement of policy as presented and directing that the statement be included with minutes of the meeting. The motion was made and seconded.

Mr. Goolsby stressed the importance of everyone fully understanding the situation. It was brought out that a number of states have been grappling with the same problem and have terminated the practice of nominating members for the various Blue Shield Boards. It was pointed out that a medical society must be careful not to coerce or influence decisions by the Blue Shield Board or membership. It is for this reason that having the Society nominate five members of the Blue Shield Board is questionable and possibly dangerous. Any activity carried on by the Society which might be construed as a control function probably should be terminated.

Copies of the proposed statement were then distributed and its adoption urged. Everyone agreed that even though the Society per se cannot exercise any control functions, it is vital that physicians retain control of the Plan.

A suggestion was made that any reference to participating physicians be removed from the statement. Some fear was expressed that the statement might well trigger a mass exodus from Blue Shield on the part of participating physicians. It was agreed that such was never the intent of the Society and that

component societies should be so advised.

At this point Dr. Kuykendall moved to amend the statement by deleting the word "participating" from the third sentence of the last paragraph and by deleting the fifth sentence entirely. The motion was seconded.

Following considerable discussion, it was agreed that the motion should be divided. That portion calling for deletion of the word "participating" in the third sentence was adopted, and the sentence in its amended form reads as follows: "For this reason the Society believes that physicians must constitute a majority of the Blue Shield Board."

The second part of the motion having to do with the fifth sentence was then considered. Dr. Gailliot, in keeping with a suggestion by Mr. Goolsby, moved to amend the motion by changing the sentence in question to read as follows: "For those who are participating physicians, we urge an active role in Blue Shield to ensure the continuation of a medical insurance plan with significant physician input." The amendment was seconded and carried.

The statement as a whole was then adopted as amended and follows in its entirety:

"Pending investigations of Blue Cross-Blue Shield at both the national and state level have forced Council to take a close look at the relationship between The Medical Society of Virginia and Blue Shield. At the present time, the Federal Trade Commission is investigating provider control of Blue Shield plans throughout the United States. At the same time, Congress is conducting hearings on the relationship between physicians and Blue Shield. Meanwhile, the General Assembly has just established a special commission known as the Commission to Study the Containment of Health Care Costs. Provider control of Blue Shield will be a part of that study.

As you undoubtedly are aware, Blue Shield was formed by physicians with strong support from The Medical Society of Virginia. Support has continued through the years and hopefully will continue in the future. Notwithstanding suggestions to the contrary, Council believes that provider control of Blue Shield is critical to the continued success of the Plan. Further, Council believes provider control must be exercised through the Blue Shield Board. At the same time Council recognizes that, in order to stay well clear of the antitrust laws, the Blue Shield Board must operate independently of State and local medical and specialty societies.

Virginia law states a majority of the Blue Shield Board must be health care providers. Under the Articles of Incorporation of Blue Shield, five of the provider Board members must be nominees of The Medical Society of Virginia. We have today requested the Blue Shield Board to initiate an amendment of the Blue Shield Articles of Incorporation eliminating this requirement. As a result, election of Blue Shield directors will be the responsibility of voting members of Blue Shield, namely the participating physicians. While physicians, both individually and collectively, should remain free to suggest nominees, the selection of nominees and the election of directors should be left exclusively to the Blue Shield Board and the voting members. Likewise, any grievance that any physician has with Blue Shield should be addressed to the Blue Shield Board rather than to a state or local medical or specialty society.

The Society believes a prepaid medical plan that has strong support of the medical profession should be available to the public. To insure that support, the Plan must provide for meaningful physician participation in the decision-making process. For this reason the Society believes that physicians constitute a majority of the Blue Shield Board. Further, the Society believes that Blue Shield can improve the operations of the Plan by developing a more active provider-relations committee staffed by both participating and non-participating physicians. For those who are Participating Physicians, we urge an active role in Blue Shield to ensure the continuation of a medical insurance plan with significant physician input. We believe such a Plan is in the best interest not only of the medical profession but of all Plan subscribers."

At this point some objection was noted to a reported policy of Blue Shield of Virginia not to permit assignments where non-participating physicians are concerned. Council was advised that a number of component societies and individual members had objected strongly to the recently announced policy concerning non-participating physicians and had requested The Medical Society of Virginia to take some action. It was agreed that the policy statement just adopted should clarify the Society's position and provide the answer to all those who have filed complaints concerning the Blue Shield action. It was also agreed that the letters of complaint should be sent the Chairman of the Blue Shield of Virginia Board for his information and such follow through as he might deem advisable.

National Commission on Cost of Medical Care.

The Southwestern Virginia Medical Society recently sent Council a resolution repudiating the findings and recommendations of the National Commission on the Cost of Medical Care. The resolution took exception to the fact that AMA had contributed $400,000 to the Commission, and pointed out that many of its members were known advocates of national health insurance. It also objected to the fact that the Commission suggested that physicians and hospitals were mainly responsible for the increased cost of health care but declined to place any blame on government waste and regimentation.

A motion by Dr. Kuykendall which would support the resolution's repudiation of the National Commission, was seconded. It was brought out during dis-

cussion, however, that the Commission's report had not yet received consideration by the AMA House of Delegates and repudiation at this time would be premature. It was further pointed out that AMA would be considering the report during its annual meeting in St. Louis.

Dr. Kuykendall then rephrased his motion in such manner as to refer the resolution to Virginia's AMA Delegates for their information and guidance. The motion pointed out that Council had given serious consideration to all points covered in the resolution and appreciated the concern which prompted its adoption by the Southwestern Virginia Medical Society. It noted, however, that since AMA had not yet had an opportunity to address itself to the entire report, it would seem advisable for The Medical Society of Virginia to take no definitive action at this time. The motion was adopted.

PSRO Support Center.

Dr. Martin advised Council that the Virginia Professional Standards Review Foundation terminated its activities on March 31, 1978. The final report from the Foundation's board of directors recalled that The Medical Society of Virginia had been instrumental in the Foundation's organization and subsequent qualification as a support center. As a matter of fact, members of Council and the former Peer Review Committee made up the very first board of directors.

Although the Foundation did not encounter easy sailing in the beginning, it survived every challenge and went on to make a real contribution to the formation and development of five area PSRO's in Virginia and one statewide PSRO in West Virginia. Dr. Martin pointed out that the five PSRO's in Virginia are funded and are being directed by our own members—evidence that the support center accomplished its purpose.

Dr. Martin then singled out two individuals for special recognition as a result of the part they played in making the Foundation so successful. Dr. Robert Keeley, Roanoke, served as president from June 1974 until the present. Mr. Leon Geoffrey, the Foundation's executive director, served from the beginning to the very end.

The Foundation's final report suggested that The Medical Society of Virginia establish a special committee to study the feasibility of creating a central liaison office for the purpose of exchanging valuable information and ideas. Dr. Hagood indicated that he would give the suggestion serious consideration.

Dr. Davis then moved that The Medical Society of Virginia convey to Dr. Keeley and Mr. Geoffrey a suitable and appropriate expression of its appreciation of their accomplishments and dedication. The motion was seconded and adopted.

Fee Differential.

Mr. Moore reported that a resolution from the Danville-Pittsylvania Academy of Medicine, essentially calling for all third party carriers to use one fee schedule throughout the state, had been referred to the Insurance Committee for its recommendations. The Committee had in turn referred it back to Council, expressing the opinion that it had no alternative but to seek further clarification. The Executive Committee was of the opinion that the resolution should be sent back to the Danville-Pittsylvania Academy of Medicine with the request that it be reconsidered in view of recent developments affecting the Society's relationship with Blue Shield. The thought was also expressed that perhaps the matter was really one for the HSA's to handle.

A motion by Dr. Thompson to refer the resolution back to its authors for further study and possible resubmission was seconded and adopted.

Private Duty Nurses.

It was recalled that Council, during its meeting on February 11, 1976, had voiced its awareness of those problems confronting carriers where private duty nursing coverage is concerned. At the same time it urged that carriers not question the orders of attending physicians.

Dr. Davis indicated that there are some carriers which continue to deny coverage, even though it is ordered by the attending physician and the policies clearly provide for such coverage. He moved that the problem be referred to the Insurance Committee with the request that it take such corrective action as might be necessary—including a discussion of the problem with the State Insurance Commissioner. The motion was seconded and carried.

Member Loan Program.

Mr. Moore reported that the Society's new vehicle leasing and member loan program is being well received by the membership. Thus far 126 inquiries have been received and five contracts for automobiles processed by the company. Twelve loans, totaling $175,000 have been made thus far.

AAMSE Educational Fund.

It was recalled that the American Association of Medical Society Executives had last year requested each state medical society to contribute $500 a year—for three years—to its educational fund. The Medical Society of Virginia contributed $100 in 1977.

AAMSE has now submitted a 1978 statement for

$500 along with a followup request. It was the recommendation of the Executive Vice President that another $100 contribution be made in 1978. A motion by Dr. Davis to this effect was seconded and carried.

Med Prep.

The Executive Committee recommended that a project proposed by the Jeppesen-Sanderson Corporation of Denver be endorsed with certain provisions. The project, which has the full endorsement of approximately eleven state medical societies, is designed to reduce the number of malpractice suits through patient education and informed consent. The project features short educational video tapes on numerous medical and surgical procedures. The tapes are viewed through self-contained table top units and are already being widely used in some parts of the nation.

The Executive Committee's recommendation was made with the understanding that the entire promotional cost would be assumed by the company and that all communications and transactions would be between the physician and Jeppesen-Sanderson with no administrative involvement by the Society.

A motion by Dr. Gailliot to approve the Executive Committee's recommendation was seconded and adopted.

Congressional Luncheon.

Dr. Alexander reported that the annual congressional luncheon had been held in Washington on April 25 and that those attending had an opportunity to discuss key issues of the day with the entire Virginia congressional delegation. Subjects discussed included the cost of medical care, national health insurance, the role of HSAs, government control and regimentation, etc. It was agreed that this luncheon was certainly one of the most productive of recent years.

Legislative Report.

Mr. Goolsby discussed the recently concluded 1978 session of the General Assembly and commented on those pieces of legislation of special interest. He mentioned that although the Optometry Bill was vetoed by the Governor, medicine should not become complacent. It is entirely possible that similar legislation will be introduced next year. He called attention to the fact that the Board of Medicine will now be able to suspend the licenses of those physicians appealing felony convictions. It was noted with interest that legislation having to do with laetrile was not introduced—a definite accomplishment in view of what has happended in many other states. It was also noted that a Death with Dignity Bill was not introduced this time.

Telephone Directory Listings.

Council, during its meeting on November 19, 1977, expressed the hope that a disclaimer could be published in telephone directories as to any input or involvement by medical societies where specialty listings are concerned. Mr. Osburn reported that he had met with directory officials and had been advised that a disclaimer was out of the question. Telephone officials would, however, welcome input from local medical societies concerning the accuracy of the various listings.

Some dissatisfaction was expressed with the telephone company's response and a suggestion was made that the Society seek the assistance of the State Corporation Commission. A motion to this effect by Dr. Caravati was seconded and adopted. Dr. Hagood indicated that a special committee would likely be appointed to carry out the wishes of Council.

Conference on Negotiation.

Council was advised that Dr. Hagood and Dr. Wallace represented the Society at a recent AMA-sponsored Conference on Negotiation in Arizona. It was considered most worthwhile.

Dr. Hagood announced that an advanced Conference has been arranged for those members of the Society who attended the first one last year. Dr. Summers stated that the Conference would be held on the weekend of October 6-8 at the Quality Inn, Pentagon City, Alexandria. There will be a modest registration fee to be paid by the individuals attending. It was stressed once again that only those who have attended Negotiation Conference I (Virginia or elsewhere) will be eligible for Negotiation Conference II.

A motion by Dr. Alexander to approve the Conference was seconded and adopted.

Any questions concerning the Conference should be directed to Dr. Summers. He can be reached at (804) 353-2721.

Cerebellar Stimulator Pacemakers.

The United States Civil Service Commission has requested the Society's opinion on the use of cerebellar stimulator pacemakers for control of spasticity in cerebral palsy. The Commission is particularly anxious to learn whether the implantation of such pacemakers is a sound and valid procedure or whether it should be considered experimental.

A motion by Dr. Cook to refer the matter to the Committee on Child Health was seconded and carried.

Itemization of Bills.

Last September, when Council was requested by Medicare to urge all physicians to provide itemized

bills as a standard procedure, it expressed the opinion that Medicare could make things much easier by switching to the five digit code developed under AMA leadership. It was convinced that this would help eliminate many time consuming clerical problems. A motion was adopted at that time requesting Medicare to make its reasons known for not recognizing the CPT five digit code.

Mr. Osburn reported that he had discussed the Council action with Medicare officials and had been told that switching to a five digit code would have to be a nationwide undertaking. Because of this, it was doubtful that such a code change would be attempted in the foreseeable future. Medicare expressed the hope, however, that, regardless of the code problem, the Society would encourage its members to use itemized bills as a regular and standard procedure.

Membership Poll.

The Indiana State Medical Association has requested all state medical associations to poll their membership with reference to the AMA Comprehensive Health Insurance Bill. The poll would seek to determine whether the membership supports such legislation or whether it feels it should be withdrawn.

Council was advised that the matter will, in all likelihood, be discussed once again at the upcoming AMA meeting at St. Louis. A motion by Dr. Davis to receive and file the Indiana request as a source of information was seconded and adopted.

Joint Practice in Hospitals.

The attention of Council was directed to a resolution recently adopted by the Virginia Nurses' Association having to do with joint practice in hospitals. There was some feeling that the Resolution contains rather far-reaching implications where the future practice of medicine in Virginia is concerned. The resolution referred to a set of "Guidelines for Joint Practice" which will be published in 1980 following a demonstration project to be carried out by four hospitals of different size and type. The project is designed to introduce a primary nursing system, an integrated patient record system and a joint physician-nurse evaluation of patient care. The resolution goes on to request the State Boards of Nursing and Medicine to monitor the demonstration programs very carefully and that any statements from the two Boards be amended only after the national guidelines are published.

Dr. Cook, Chairman of the Society's Joint Practice Committee, stated that the Committee would monitor the demonstration project and that its findings and guidelines will be reviewed by Medical Service Consultants, Inc. A report will then be made to Council at the proper time.

Prescription Labels.

Dr. Kuykendall reported that some pharmacists continue to add unsolicited comments on prescription labels. These remarks are, in most cases, unnecessary and in some instances might even be considered dangerous.

Such practice seems to be a violation of the law. Mr. Osburn stated that he will discuss the matter with Mr. Carson of the State Board of Pharmacy and feels sure the practice will soon be terminated.

Proposed Statement.

A suggested statement on the action of Council with reference to Blue Shield was distributed as a matter of information. The statement will be sent to all component societies in order that their officers will be in a better position to answer questions which might be received from the media or other sources.

It was agreed that component societies should be urged not to take any action which might be construed as a recommendation that participating members of Blue Shield become non-participants.

Beverly Orndorff.

Council was pleased to learn that Mr. Beverly Orndorff, Science Editor of the Richmond *Times-Dispatch*, had recently been honored by being awarded an honorary life membership in the Virginia Academy of Science.

A motion to send a special letter of congratulations to Mr. Orndorff on behalf of The Medical Society of Virginia was seconded and carried.

Mr. Julian Wise.

Dr. Hagood called Council's attention to the fact that the first life saving and rescue squad in the world was organized 50 years ago in Roanoke. The individual responsible for that first rescue squad was Mr. Julian Wise, and he is being honored on the 50th anniversary of his greatest achievement.

Dr. Hagood read a letter of appreciation which he will send Mr. Wise and also recommended that a special Resolution be adopted. In keeping with that recommendation, the following resolution was adopted unanimously:

WHEREAS, the very first life saving and rescue squad in the world was organized in the Roanoke Community exactly 50 years ago, and

WHEREAS, that first rescue squad provided the stimulus for those now existing in countless communities throughout the United States and many foreign nations, and

WHEREAS, the individual who organized that first rescue squad is a life-long resident of Roanoke, and

WHEREAS, the accomplishments of this illustrious Virginian have won the admiration and recognition of many groups and organizations all over the world (recipient of the Red Cross Medal of Honor and the Charlotte Randall Memorial Trophy), and

WHEREAS, to honor this man is to also honor the thousands of volunteers who, through their daily missions of mercy, restore the faith of a sometimes insensitive society in such basic and eternal values as courage and compassion, now be it therefore

RESOLVED, that The Medical Society of Virginia officially express to Mr. Julian Wise of Roanoke its appreciation of his contributions to mankind everywhere and congratulate him on the 50th anniversary of one of the greatest and most meaningful achievements ever realized by a citizen of this Commonwealth and Nation.

Future Meetings of Council.

It was agreed that the next two meetings of Council will be held on Saturday, July 15, and Saturday, October 14.

There being no further business, the meeting was adjourned.

Robert I. Howard, Secretary

APPROVED:
William J. Hagood, Jr., M.D., President

MEETINGS ABOUT MEDICINE

July

Pediatric and Adolescent Endocrinology and Metabolism, sponsored by Dept. of Pediatrics, University of Virginia School of Medicine, *Charlottesville,* July 31-August 4. Ms. Peggy Denby, Box 386, UVA School of Medicine, Charlottesville 22901.

August

Coronary Disease, Exercise Testing, and **Cardiac** Rehabilitation, sponsored by International Medical Education Corporation, Hospitality House, *Williamsburg,* August 4-6. IMEC, 64 Inverness Drive East, Englewood CO 80110, 800 525-8646 toll free.

Aspen **Mushroom** Conference, Wildwood Inn, *Snowmass-at-Aspen, Colorado,* August 13-18. Emanuel Salzman, MD, Beth Israel Hospital, 1601 Lowell Blvd., Denver CO 80204.

September

Diagnostic **Ultrasound** in Obstetrics and Gynecology, Johns Hopkins Medical Institutes Dept. of Radiology/Radiological Science, *Baltimore,* September 7-8. Program Coordinator, Turner Auditorium, Room 22, 720 Rutland Ave., Baltimore MD 21205, 301/955-5880.

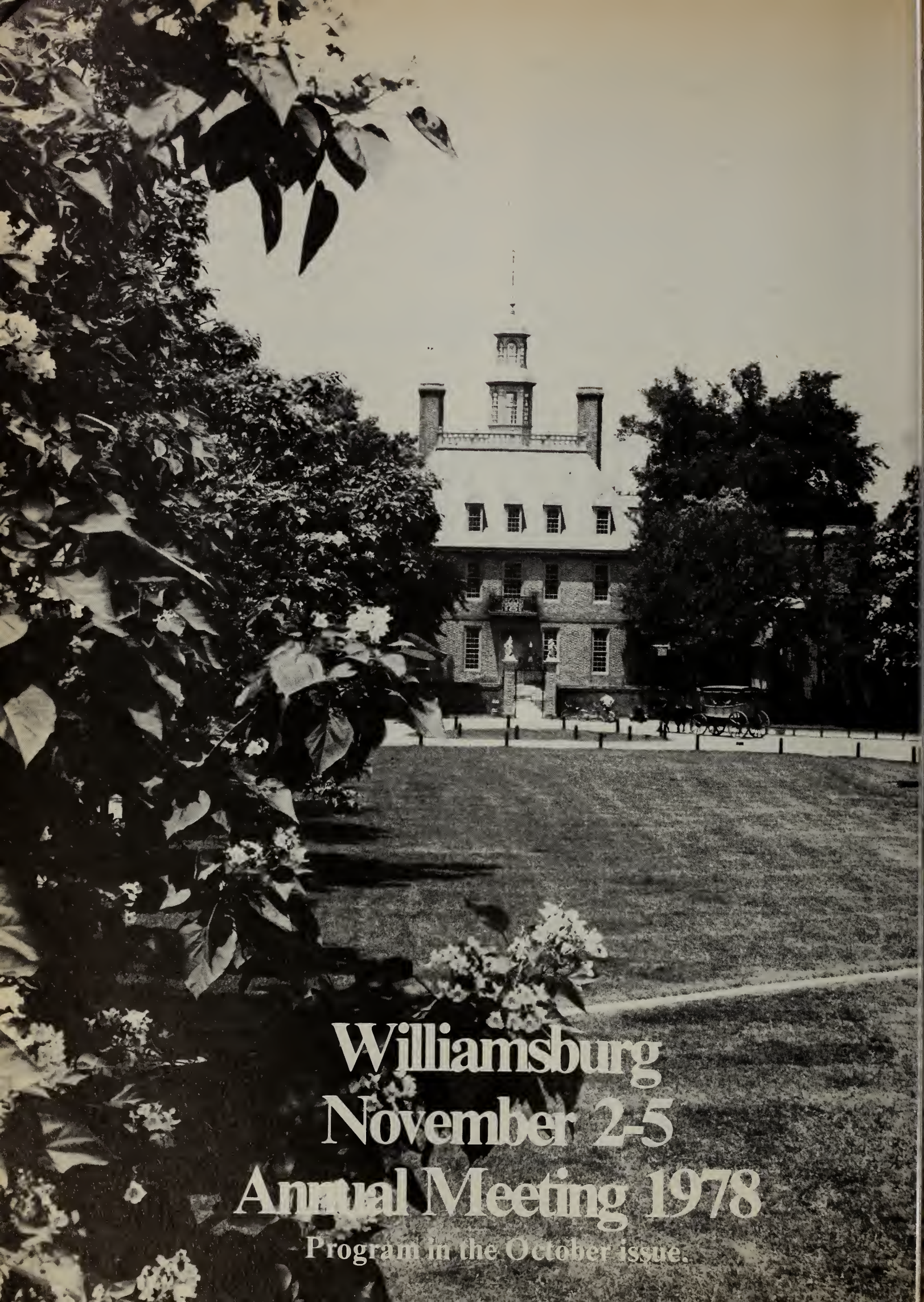
26th Annual Tennessee Valley Medical Assembly, September 11-12, *Chattanooga.* Dr. Jerome H. Abramson, 960 East Third Street, Chattanooga TE 37403.

National Conference on the Care of the Child with **Cancer,** sponsored by American Cancer Society, Sheraton-Boston Hotel, *Boston,* September 11-13. Sidney L. Arje, MD, American Cancer Society, 777 Third Ave., New York, NY 10017.

Cardiology for the Clinician, sponsored by Tidewater/Virginia Peninsula Chapters, American Heart Association, and Eastern Virginia Medical School, Hospitality House, *Williamsburg,* September 21-23. Tidewater Chapter American Heart Association, 891 Norfolk Sq., Norfolk 23502, 804/857-5961.

American Society of **Internal Medicine,** Interim Meeting, *Orlando, Florida,* September 29-30. ASIM, 535 Central Tower Bldg., 703 Market St., San Francisco CA 94103, 415/777-1000.

Primary Care of Hand Injuries, sponsored by American Society for **Surgery of the Hand,** *Sea Island Georgia,* September 28-October 1. American Society for Surgery of the Hand, 2600 S. Parker Rd., Aurora CO 80014, 303/755-4588.



Williamsburg
November 2-5
Annual Meeting 1978

Program in the October issue.

VIRGINIA MEDICAL

EDITORIAL

"The Lesson Is Unity"

PHYSICIANS have a great deal to learn from the coal miners' union. The recent strike defied the entire United States.

The convenience, even the health and welfare of the nation was secondary to the demands of the union.

The strike was anathema to people who have trained all their professional lives to serve.

The lesson is unity. We must unite. Our leaders must speak for all physicians. When the leaders of medicine speak, it must be with knowledge of the total, unreserved backing of their colleagues.

Physicians must become members of their county, state, and national societies. The members of these societies choose their leaders. These leaders must speak with a single united voice for all physicians. When physicians present a united front, we can win acceptance for our views. Physicians can practice medicine. The Congress, and especially Mr. Califano, cannot treat even one patient for congestive heart failure. Our patients must be aware of this.

Physicians, be a member of your societies (bring in your fellows—there are many not now joined with us), elect your leaders, and back them wholeheartedly.

A few unionized miners brought this country to its knees economically.

United, physicians can preserve the best medical system the world has known.

GEORGE M. NIPE, MD

"Where Do We Go From Here?"

WE ARE besieged. To listen to the media, a national health service is just around the next legislative corner. Never actually accepting this, let's look at some examples of national health service as practiced in other areas.

What are the major problems to face as learned in 30 years by the British? In attempting to establish a service equally of benefit to the patient, the doctor and the nation, let's make no mistake about this: the British system has not been an abject failure. Far from it. Thousands of Britons have received better medical care, free from financial worries, than would have been the case had it not existed. No, it is primarily the work and status of the doctor, and hence, the profession as a whole, that has, and is, suffering. The extent is such that both clinical and ethical standards are being adversely affected.

A humanitarian profession has come into head-on collision with an impersonal government machine. Financial concerns have taken precedence over clinical and ethical standards, and these have been increasingly geared to a regimented methodology. State monopoly has grown, threatening independence and freedom of choice. The basic purpose of the service is to provide a "health service" for the community to the best of the nation's financial ability. To date the British model is essentially a "disease service" and sadly has become a "diseased service".

So far no country in the world has been either able or willing to provide from its gross national product sufficient funds to ensure the initiation and maintenance of a comprehensive state medical service. In

Britain this is now 5.5% of the GNP or £100 per head of population, and this is woefully inadequate as evidenced by underpaid staff, non-replacement of worn out facilities, and failure to keep others up to modern levels. This all inevitably leads to a fall in standards of care.

Ten years ago a British doctor received five times the wages of a manual laborer—now it is cut to three times. British physicians' salaries are ludicrously below their counterparts in Europe, Canada, America, and Australia. It would seem the British system needs overhauling. Similar schemes in Australia on a far less ambitious scale have ended in a better end product—this based on national health *insurance* backed by state subsidy. France and Canada have younger, more efficient systems where all enjoy the status of "private" patient.

Then there is the question of morale. A state medical service will flounder unless the morale of those who work in it is high. Politics and medicine are immiscible. If a governmental or national health system is to produce the most good for the most people (itself arguable), such a system demands all the cooperation, mutual trust, and understanding both sides can give it. The profession must have a sense of being fairly treated. The physician must have professional freedom to decide how, where, and under what conditions he can, to the best of his ability, perform the services his patients need.

Too much to ask, you say. Well, look around you. The governments who rule their medical professions with a light rein invariably have the most efficient and economical services.

Laws, like people, pass through critical stages in their development. Within the next year, half the proposed PSRO's will be in place, and more than 6 million Medicare and Medicaid hospital admissions will be measured against the program's standards. Though quality control was ballyhooed as the catalyst, it was well understood that cost control would be the real measure of PSRO's success. Last year, public and private expenditures for PSRO and other quality review activities exceeded a quarter of a billion dollars, and knowledgeable people predict within the decade we will spend 2-5 billion dollars. Peer review has become big business. It costs right now $10-$36 to review one patient. There doesn't seem to be much room for saving or efficiency in these kinds of bureaucratic shenanigans.

The National Research Council of the National Academy of Sciences issued a report on 171 VA hospitals which is illuminating. Today the government is pouring $40 billion into medical care, 28% of the total national bill. A rather startling 10% of that annual total ($4 billion) goes to the VA. Extrapolate this to the entire population; that would mean $280 billion, by any standard a massive and disproportionate investment. And although the government is loath to admit it, it also marks its efforts as an embarrassing failure.

There are, this report says, too many acute-care beds and too few long-term ones. The problem lies in the way the system works. VA medicine is "free" medicine and over-utilized, inpatient care preferred over outpatient as a matter of course. The inevitable result is that long-term patients (ironically these patients tend to be wounded veterans) frequently find no beds available. On the other hand, there are too many acute-care beds. About one-half the patients in acute-care VA beds, one-third of the patients in surgical beds, and over half the patients in psychiatric beds do not need and do not receive services associated with such beds.

The average acute medical stay in a private hospital is 8.2 days, acute surgical stay 8.4 days. In a VA hospital the average acute medical stay is 26.5 days, acute surgical 22.2 days. These extended stays inevitably have an affect on costs.

The VA system, in short, is the best example extant in this country of what nationalized medicine would be like. The obvious conclusion, therefore, is that there should be no such system on a national scale if we prefer solvency.

Summoned to lead us out of the escalating health costs, maldistribution of resources, and too much providerism, the health planners and analysts have proposed solutions with disastrous results. Planning is not a dirty word, but the politics of health planning can be. There are three parties to that "operation". Physician, politician, and planner. The physician is a busy person, dealing with moment-to-moment crises. Still, he should be involved in the important work of planning, since his future depends on it. However, the important yields to the urgent: he takes care of patients.

The politician is also a busy person, but he has an additional problem. He must make decisions about health care matters without first-hand, in-depth knowledge of the health system. So he delegates information gathering, recommendation making and decision making to the professional planner.

The planner has a significant problem. Unlike the physician, he lacks knowledge of the intracacies of the health system; he knows cost but not value. Unlike the politician, he has no constituency and hence no accountability. His proposals can be adopted, but he never has to account for them or live with them if they fail. This is a dangerous dynamic, and the results are presentations of mere hopes and aspirations rather than realities.

"Planning is too important to be left to planners". We need planning. We don't need an influx of planners. We as physicians must become deeply immersed in planning health care. If we delegate or abdicate our planning responsibilities, we are in effect deciding not to help decide what tomorrow's health care system will be. Doctors can weigh the cost of things against the value of things; can sort hopes and aspirations from realities; are accountable to patients, politicians, and the public.

Perhaps it is the evaluation of medicine in terms of the business world that causes the problem. There are distinct differences between the professional format and the commercial format. In the professional format a patient seeks expert care or advice from a physician and establishes a direct relationship between the physician and himself. Patients are attracted by reputation, or referral from others, based on experience and general competence. They are protected from the poorly qualified or the unscrupulous by several means. First, the entry control; in standards of education, training experience, and demonstration of competence; by license examination, and scrutiny by professional superiors. Second, a strong professional society with a code of ethics; there are no trade secrets in medicine and peer review is considered vital in continuous upgrading of standards. Lastly, there are mechanisms for complaints or appeal through city and state societies; and if no satisfaction with these, there still remains the fairly generous judicial system. The commercial format has only a judicial system.

Why then must medical care be forced into the commercial world? Why should we lower entry standards for practitioners? Why should non-professional groups be allowed to commercialize areas such as laboratories, EKG, health screening programs? Why do we have to abandon traditional mechanisms such as our code of ethics, prohibition of advertising, noncompetition for fees (which were developed to avoid commercial abuse)? Why, in the face of the fact that the public seems to hold the credibility of physicians at a fairly high level and the credibility of business men and lawyers at a relatively low level? Why should we be forced into the commercial world?

We are besieged at present by a federal bureaucracy that is determined to plan for us. Like it or not, we have a federal law, the National Health Planning and Resources Act of 1974 (PL 93-641). It is tremendous tonic. Basically it provides for a three-tiered structure of 200 Health Service Agencies (HSA) with State Health Coordinating Councils (SHCC) and regional HEW offices overseeing the activities of the HSA's and SHCC's. The local boards, generally 30 or more, are politically appointed and by law a majority must be "consumers," while the so-called providers may be anyone vaguely associated with medicine: retired nurses, government economists, insurance company officials, physicians' wives, and others who qualify as indirect providers, as well as the direct health care professionals.

What do they do?

They are charged with developing "health system plans for their area, they must approve certificates of need" (including those financed by private dollars) for expansion, renovation, modernization or purchase of equipment, by hospitals, labs, nursing homes, health care installations and certain physicians' offices. They will soon be required to conduct "appropriateness reviews" of all health institutions and make recommendations and sanctions.

Where do we go from here? Not to be redundant, but our state Society has laid down some guidelines.

- Contact your congressman and request a copy of PL 93-641. Study it.
- Attend meetings of your local HSA. Submit statements to the board and request time to read it to the board, with a copy to the press!
- Serve on the HSA boards if possible. You will be a minority.
- Educate your friends and patients. Their voices help politically to revise this law.

There are few guarantees in medicine. Uncertain outcomes in care and treatment would be more palatable to the public, however, if we pledged to restore the pride and concern for patient welfare in general that was once the *sine qua non* of the medical profession. We must, therefore, declare our intention to put an end to an array of disgraceful medical practices. It is not enough that we practice good medicine if we know someone else out there is a threat or menace to the health of some unsuspecting patient.

There are rights and privileges, duties and obligations on both sides. We should not forget our own. We should speak with one voice, especially when we negotiate with bureaucracy. Our Society should speak our wills and negotiate forcibly for us. Nevertheless, a harmonious and progressive health care system will succeed only when politicians and physicians and the public cease to serve self-interests alone, and physicians continue to monitor medical practice. This law is here to stay, but it can be modified to make it more realistic. To do this it needs what it lacks now, our professional experience. We must adhere to the first law of medicine: *Primum non nocere.* First do thou no harm.

WILLIAM C. GILL, JR., MD

Excerpted from the inaugural address of the president, Richmond Academy of Medicine, Richmond, Virginia, January 10, 1978.

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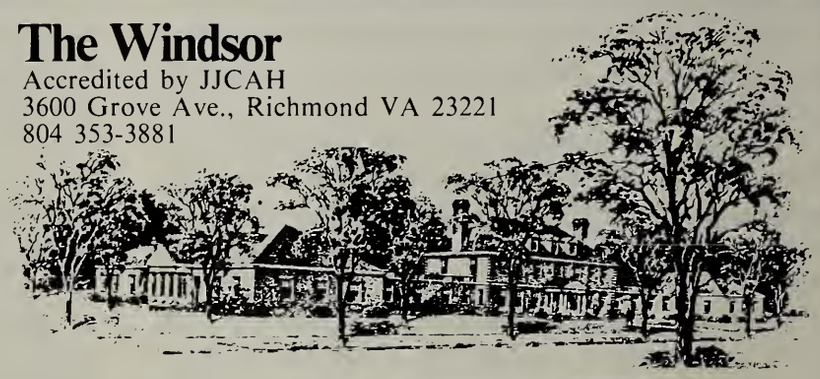
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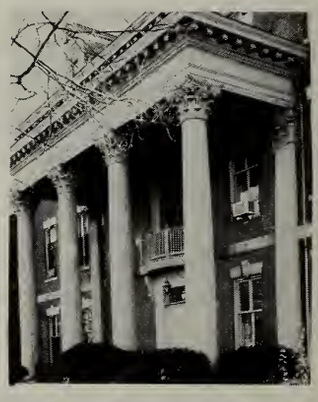
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VIRGINIA MEDICAL OBITUARY

Memoir of C. C. Chewning 1911-1978

By Thomas S. Chalkley, MD, Frank Pole, MD, and J. Warren Montague, MD

Clarence Conway Chewning, Jr., better known to all of us as Pat, was born in Chilesburg, Caroline County, Virginia, on March 15, 1911. He was graduated from Beaverdam High School, and, in 1931, was graduated from the University of Richmond. While at the University of Richmond, he was a member of the Phi Gamma Delta social fraternity, and the AOA honorary fraternity. Pat received his medical degree from the Medical College of Virginia in 1934, where he was a member of the Phi Chi medical fraternity. He served his rotating internship at Stuart Circle Hospital and a year of surgical internship at the Medical College of Virginia.

Pat Chewning then began a practice of general medicine in Bowling Green, Virginia, where he met, and, on July 26, 1938, married his devoted wife, the former Louise Thompson. Returning to Richmond in 1940, he entered the practice of medicine and surgery.

At the outbreak of World War II, Pat volunteered his services and was assigned to the surgical service of the Army General Hospital in Hot Springs, Arkansas. Following this assignment, he served with the 168th General Hospital in France, attaining the rank of captain.

In March, 1946, he became the resident physician at McGuire Veterans Hospital and in September 1946 became the resident in general surgery. In 1948 he joined Drs. Emmett and Robert Terrell in the practice of proctology and remained in practice with Dr. Robert Terrell until his death.

Dr. Chewning was a member of the Richmond Academy of Medicine and The Medical Society of Virginia. He was a fellow of the AMA, the Piedmont Society of Colon and Rectal Surgeons, and the American Proctology Society.

Pat's interests were not limited to medicine. He was a very active member of St. Stephens Episcopal Church, where he served as vestryman. He was active in the Kiwanis Club, a member of the Country Club of Virginia and a founder of the Richmond Symphony. Besides his family and medicine, his three loves were music, bridge and golf.

Pat Chewning was a physician and a gentleman, much beloved and admired by all who were fortunate enough to know him.

Prepared and published at the request of the Richmond Academy of Medicine.

Charles C. Powel, MD

Dr. Charles Calhoun Powel, a member of The Medical Society of Virginia 35 years, died April 5 at his home in Harrisonburg. The pediatrician was 63 and had been president of the Rockingham Medical Society and the Virginia Pediatric Society.

Born in Chattanooga, Tennessee, Dr. Powel was graduated from the Emory University Medical School in Atlanta and began his practice in Harrisonburg in 1942. He was instrumental in forming the poison control center at Rockingham Memorial Hospital and had been president of both the Rockingham Crippled Children's Rehabilitation Center and the Rockingham County Chapter of the Society for Crippled Children. Active in community affairs, Dr. Powel had served on the Harrisonburg School Board, the city's Recreation Commission, and the Selective Service Board; he was team physician for the high school athletic teams and in 1961 received the Pop Warner Distinguished Achievement Award for service to youth.

Harry S. Abram, MD

Dr. Harry Shore Abram, Nashville, Tennessee, died September 3, 1977. A psychiatrist on the faculty of the Vanderbilt University School of Medicine in Nashville, Dr. Abram was a graduate of the University of Virginia School of Medicine and belonged to the American Psychiatric and Psychoanalytic Associations, and the Academy of Psychoanalysis.

Neil Callahan, MD

Dr. Neil Callahan, Portsmouth, died April 12 at the age of 61 years. Dr. Callahan's specialty was ophthalmology and otolaryngology. He earned his medical degree at Tulane University and had belonged to The Medical Society of Virginia 30 years.

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From the President: A Vote for the PSRO

WHEN Congress passed legislation creating the Professional Standards Review Organization several years ago, I personally viewed the early Virginia organizations with thinly veiled apprehension. And I certainly was not alone. Along with my colleagues in the Halifax County Medical Society and physicians in the Medical Society of Virginia, I was concerned that our profession was "selling out" to the federal government if physicians took part in the program. Along with strong misgivings about the motives behind the legislation and its "now-or-else" demands, I felt that, in the least, PSRO was going to try to teach me how to practice medicine.

However, since I have been in office, I've had an opportunity to take a closer look at PSROs in action. I've seen firsthand how these groups have worked to carefully and meticulously develop local medical care standards to help assure quality medical care for the people of Virginia and to work on behalf of physicians and patients despite intense pressures from government and some members of our profession. In Virginia, more than half of acute care hospitals are now under local review.

PSRO's are also filling another sorely needed role, that of a counterbalance to federal government and special interest groups and their attempts to interfere in quality assurance. Through PSRO, physicians have a voice that, for example, Health Systems Agencies are legislatively mandated to hear. Recently

there was a case in which a Virginia HSA attempted to become the local arbiter and implementor of medical care standards. The local PSRO insisted that the HSA's actions were illegal and inappropriate. As a result of the firm stand taken by the PSRO's leadership, the HSA backed off. And, this is only one instance of many I could cite.

PSROs are also fighting to maintain the confidentiality of their record-keeping systems. The battle is far from over, and those in leadership positions continue to refuse to supply physician identification numbers and have put protections around PSRO data. At the heart of this issue, however, is that PSRO is an organization of the private sector put together to do a specific job for the federal government. If SB3196, Senator Schweiker's legislation clearly spelling out that the PSRO "shall not be considered an agency of the federal government", is passed as expected, the matter will be settled once and for all.

When the PSRO program was created by Congress, it was not intended to solve our health care cost crisis. In fact, the law was enacted despite warnings from health care providers that excessive emphasis on quality standards might well increase rather than decrease costs. Nevertheless experience has shown that PSRO has made repeated contributions to cost containment efforts and has brought to the public's attention some of the problems physicians face. For example, PSRO has pointed out that millions of dollars are being wasted on excessively long hospital stays because of shortages of skilled nursing beds.

And, despite ongoing interference from HEW, OMB, and GAO, PSRO is growing. This rather remarkable growth is primarily because of a change of

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attitude in the medical community itself. A majority of physicians in Virginia have come to understand and appreciate the benefits of quality assurance and PSRO's potential for being a watchdog to protect high quality care.

Each of us, of course, has had to resolve his or her own doubts. After taking a closer look, I joined PSRO this spring because I sincerely felt it was in my best interest as well as in the best interest of my patients and our profession.

No one can say how long the beleagured PSRO program will be around and whether or when the bureacracy will succeed in wresting control of quality assurance from physicians and the private sector. However, the fact is that it is still ours. Through PSRO, *we* have the chance to assure high standards of care for the people of Virginia.

And, in order for the Society to have even more exchanges of information and ideas on assuring continued quality of care, I have appointed a new committee under the chairmanship of Dr. Harry C. Kuykendall, Councilor. The committee will act as a liaison between PSROs and the Society. This will be of particular value as we deal with federal and state legislation and regulatory activities, especially HSAs.

To those Society members who are already involved in PSRO, I say "stay with it". To those who have yet to resolve their most serious doubts, I say "take a closer look" at the program. I believe it merits our support.

William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

New AMA Post for Dr. Hotchkiss

Dr. William S. Hotchkiss, Norfolk, was elected to the Board of Trustees of the American Medical Association at its annual meeting in mid-June in St. Louis. A Past President of both The Medical Society of Virginia and the Norfolk County Medical Society, Doctor Hotchkiss was elected at the 1977 annual meeting to the AMA's Judicial Council, a post he resigned to seek the Trusteeship.

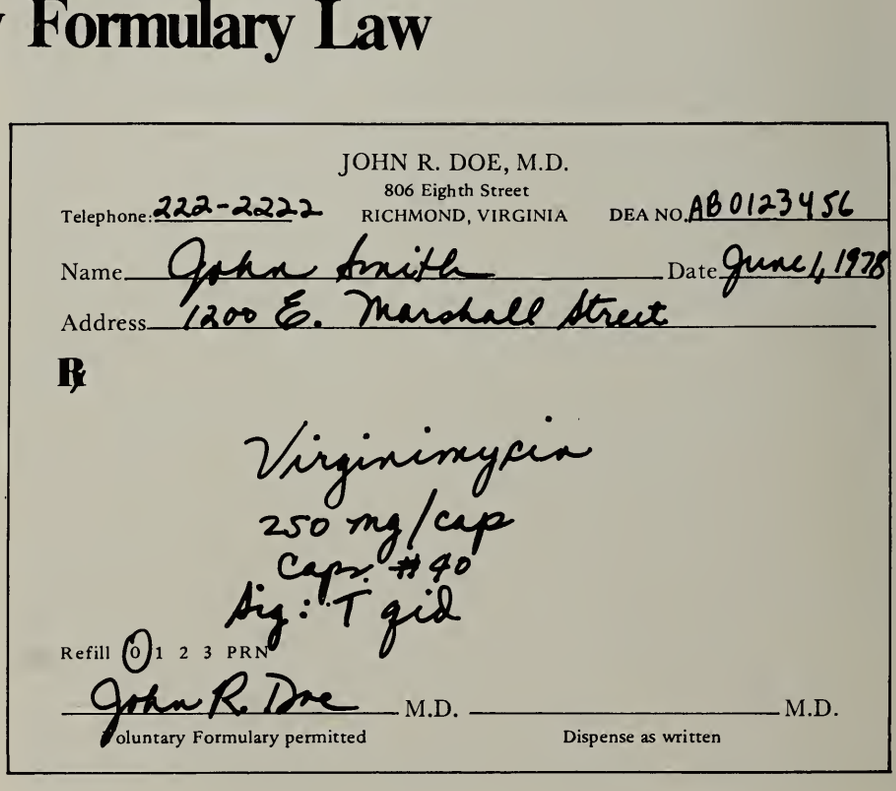
How to Prescribe Under the New Virginia Voluntary Formulary Law

Virginia physicians must order new prescription forms for use beginning January 1, 1979, to meet requirements of the Virginia Voluntary Formulary legislation. This sample shows how the form should be printed. Of key importance are the two lines for signature.

Signature on the "Voluntary Formulary permitted" line signals to the pharmacist that he may select a drug product from the approved Formulary list. The bottle dispensed and the prescription filed will specify the product dispensed.

The physician may use either trade or generic name in specifying the prescribed drug.

When a physician prescribes a drug orally, the pharmacist must follow the oral instructions without variation.


JOHN R. DOE, M.D.
806 Eighth Street
Telephone: 222-2222 RICHMOND, VIRGINIA DEA NO. AB0123456
Name John Smith Date June 1, 1978
Address 1200 E. Marshall Street
℞
Virginimycin
250 mg/cap
Caps. #40
Sig: 1 qid
Refill (0) 1 2 3 PRN
John R. Doe M.D. _____ M.D.
Voluntary Formulary permitted Dispense as written

LETTERS TO THE EDITOR

Preventive Medicine: Applause and Argument

Dr. Frederick J. Spencer's editorial, "The Great Preventive Life-Style Cop-Out", which appeared in the April issue of VIRGINIA MEDICAL,[1] has prompted me to write you.

If I understand Doctor Spencer's editorial, he believes that the medical profession is "copping-out" by exhorting the individual to become his own preventive medicine unit in the matters of drinking alcohol, smoking, and caloric imbalance, and by putting the responsibility directly on the individual for avoiding such disease-producing activities, even though he enjoys them. Medicine has failed because it has found no way to give people their "pleasures" and their health, too.

By a line of reasoning not quite clear to me, Doctor Spencer believes that just because preventive medicine in the past has performed its miracles largely by measures done *to,* and not *by,* each person, such as the provision of clean water, milk and food, preventive medicine today should not put responsibility on the person for his own health.

Surely Doctor Spencer knows that preventive medicine, even in the past, has asked much from the individual for his own welfare: drug and netting prophylaxis against malaria, avoidance of bodily contact with waters bearing the schistosome intermediaries, proper cooking and curing of pork to prevent trichinosis and infestation with taenia solium, proper canning to prevent botulism, personal prophylaxis to prevent venereal disease, to name only a few.

We have no argument with, and even applaud, Doctor Spencer's other suggestions to avoid illness and death, such as measures to combat the carnage on our nation's highways. I must remind Doctor Spencer that the individual's "whim" to drink is involved in a half of this dreadful toll, which does not discriminate between the innocent and the guilty.

Might I add to Doctor Spencer's knowledge of our country's history: The Founding Fathers decreed we had a right to bear arms not only because they were faced "with hostile Indians and black bears", but also because they had experienced the red-coated tyrant from across the sea.

Doctor Spencer has every right to publish anything he wishes, so long as it is within the bounds of good taste (which his essay is), and so long as it is understood to represent his own opinion.

But his essay is in the editorial section, and he is carried as a member of the Editorial Board. Are we to assume, sir, that his editorial has the approbation of the Editorial Board, and of you, the Editor? If so, and most important, are we to assume that this editorial represents the official opinion of The Medical Society of Virginia, because VIRGINIA MEDICAL is its official publication?

These are matters whose clarification you owe the readers.

Christian V. Cimmino, MD
Mary Washington Hospital
Fredericksburg VA 22401

1. Spencer FJ: The great preventive life-style cop-out (editorial). Va Med 105:327, 1978

Editors' Note: The Editors are not aware of an "official opinion of The Medical Society of Virginia" regarding the issues raised.

Dr. Spencer replies: My message was, and still is, that until we physicians can achieve more success in changing our patients' "life-styles", then we should be honest and admit it, and set about putting into effect measures we now have to prevent disease. Dr. Cimmino quite rightly points out the role of alcohol in traffic accidents, but our record of persuading people to stop drinking is abysmal—in fact we promote the use of alcohol through advertising! More sense, then, to require that seat belts be worn. As for gun control and Dr. Cimmino's comment on the "red-coated tyrant from across the sea", I can hardly envision today's impoverished England mounting an invasion on America's shores.

Apart from these comments, Dr. Cimmino gives specious examples of individual prevention: More trichinosis has been prevented by requiring garbage to be cooked before feeding it to hogs and by freezing pork for commercial distribution than by cooking and canning it; legislation to ensure safe commercial canning has been the main factor in the absence of botulism; the drainage and treatment of mosquito-

breeding swamps and the wholesale use of insecticides, has eliminated malaria in this country; drainage and chemical treatment, similar in principle to malaria control, has been the most successful method of eliminating schistosomiasis; and venereal disease control has failed so far, in both personal and community campaigns—the best prospect of control must be a vaccine or vaccines.

All in all, then, it is apparent that we cannot control most chronic diseases by personal action—and the infections have largely disappeared because of required immunizations. I am not against changing the way people live but until we can do it, how about promoting the methods we now have of combatting disease? I still say we could prevent a vast amount of disease by logical and concerted community action.

F. J. Spencer, MD

Hippocrates: "Pro-Life Archetype"

Hippocrates, physician and seer, formulated an oath which—two thousand years later—still summarizes and informs physicians of essential humanistic precepts that ought to govern medical practice. Having lasted two millenia, these precepts are wise insights into human health affairs, and are not the solipsist mutterings of an eccentric guru. The oath ends with a prophetic warning of specific adverse consequences that should follow violation of the oath.[1]

In the June issue of VIRGINIA MEDICAL[2], "Point of View" opines that the anti-abortion view is "merely pro-breath but anti-life". Witnesses to public hearings and debates on abortion issues before the 1978 General Assembly could conclude that some functionaries have become mere puppets for Planned Parenthood and Zero Population Growth. Blather about the cost of babies born versus aborted is stercoraceous if not mendacious, for many a Medicaid baby will grow up to pay taxes to support health and retirement needs of pro-abortion zealots.

Hippocrates was an archetypal pro-life person.[3] Except where the lives of mother and fetus come into direct conflict, induced abortion is a violation of the Hippocratic oath. For so long as the medical profession deliberately takes human life, it disqualifies itself as heir to Hippocrates and shall undergo—indeed, is undergoing—the adverse consequences he predicted.

Jerome D. Gorman, MD

8319 Fulham court
Richmond VA 23227

1. Familiar Medical Quotations, edited by MB Strauss. Boston, Little, Brown and Company, 1968, p 325
2. Welch NM: Medicaid-funded abortion: the evidence, the imperatives. Va Med 105:463-464, 1978
3. Edelstein L: The Hippocratic Oath. Baltimore, Johns Hopkins Press, 1943

AT THE GREENBRIER

"Children's Learning Disabilities," an interdisciplinary course for health care professionals, will be held on November 11-12, 1978, at the Greenbrier, White Sulphur Springs, West Virginia. Course faculty include Ronald M. David, MD (Pediatric Neurology) and Martin Lenhart, PhD (Communication Disorders) of the Medical College of Virginia; Gerald Wallace, EdD (Special Education) and Robert H. Willoughby, PhD (Pediatric Psychology), of the University of Virginia. Course tuition is $75.00. Interested parties should contact Mr. David Prestipino, The Achievement Center, 615 North Jefferson Street, Roanoke, Virginia 24016, telephone 703/982-0218.

Commends Management Article

I noted with pleasure the excellent office management article in the June issue of VIRGINIA MEDICAL.[1] I hope every physician will read it and, as he does so, will consider his own staff. And I hope there will be more such articles. This is an area in which many physicians should be more knowledgeable.

Ruth H. Dize
Executive Director, Norfolk Academy of Medicine
1006 Medical Tower, Norfolk VA 23507

1. Miles RE: Your office: does it have a "bedside manner"? Va Med 105:427-428, 1978

China, Anyone?

I have assurance of visas for a group trip to the People's Republic of China in late April/early May 1979. The trip will involve two weeks in China as a group and possible independent visits after that to other countries in the area (perhaps New Guinea and Bali). If interested, please write to me giving number of persons, places other than China you would like to visit, and amount of time you can be away.

Joseph D. Warner, MD
1100 First Colonial Road, Suite 301
Virginia Beach VA 23454

The Editor welcomes your letters on any subject of concern to you. Type in double space, please. Address the Editor at 4205 Dover Road, Richmond VA 23221.

MEETINGS ABOUT MEDICINE

September

Diagnostic **Ultrasound** in Obstetrics and Gynecology, Johns Hopkins Medical Institutes Dept. of Radiology/Radiological Science, *Baltimore,* September 7-8. Program Coordinator, Turner Auditorium, Room 22, 720 Rutland Ave., Baltimore MD 21205, 301/955-5880.

26th Annual Tennessee Valley Medical Assembly, September 11-12, *Chattanooga.* Dr. Jerome H. Abramson, 960 East Third Street, Chattanooga TE 37403.

National Conference on the Care of the Child with **Cancer,** sponsored by American Cancer Society, Sheraton-Boston Hotel, *Boston,* September 11-13. Sidney L. Arje, MD, American Cancer Society, 777 Third Ave., New York, NY 10017.

Neurological Complications of Medical Illness (Neurology/CME Departments MCV), *Tides Inn, Irvington,* September 12-15. 804/786-0794.

Cardiology for the Clinician, sponsored by Tidewater/Virginia Peninsula Chapters, American Heart Association, and Eastern Virginia Medical School, Hospitality House, *Williamsburg,* September 21-23. Tidewater Chapter American Heart Association, 891 Norfolk Sq., Norfolk 23502, 804/857-5961.

Perinatal Medicine Update: Current Information for the Practicing Obstetrician, Pediatrician, and Family Physician (Ob-Gyn, Pediatrics/CME Departments MCV), *Richmond,* September 23. 804/786-0794.

R. Carl Bunts Lectureship in **Urology** (Division of Urology MCV), *Richmond,* September 29. 804/786-0794.

American Society of **Internal Medicine,** Interim Meeting, *Orlando, Florida,* September 29-30. ASIM, 535 Central Tower Bldg., 703 Market St., San Francisco CA 94103, 415/777-1000.

Primary Care of Hand Injuries, sponsored by American Society for **Surgery of the Hand,** *Sea Island Georgia,* September 28-October 1. American Society for Surgery of the Hand, 2600 S. Parker Rd., Aurora CO 80014, 303/755-4588.

Second Annual **Renal** Symposium at Sea (Kidney Foundation of Tidewater), *Caribbean Islands,* September 30-October 7: 15 hrs Category 1. Duane G. Wombolt, MD, 804/623-7367.

October

Annual **Family Practitioner**'s Symposium (Gill Memorial Hospital Foundation), *Patrick Henry Hotel, Roanoke,* October 6. David N. Keys, MD, 703/344-2071.

American Association **PSRO** 1978 Annual Meeting, Del Coronado Hotel, *San Diego California,* October 7-10. Aileen Johnson, PO Box 230, Stockton CA 95201.

American College of **Surgeons,** Clinical Congress, *San Francisco,* October 16-20. Fred C. Spillman, American College of Surgeons, 55 E. Erie St., Chicago IL 60611.

John Hoover Moon Memorial Lectureship (Division of **Hematology** MCV), *Richmond,* October 25. 804/786-0794.

50th Annual McGuire Lecture: **Cardiology** (Cardiology/CME Departments MCV), *Richmond,* October 27-28. 804/786-0794.

Want To Emphasize Your Meeting? Here's How.

The entries in the Meetings about Medicine columns of this journal are a service to physicians and are presented without charge.

But for those who wish additional emphasis for their meetings, Virginia Medical offers to medical organizations and institutions these professionally discounted rates for display (boxed) ads adjacent to the Meetings about Medicine columns: ⅛ page, $22 one time, $18 each of three times; ¼ page, $40 one time, $36 each of three times; ½ page, $75 one time, $69 each of three times.

Advertisers may present camera-ready copy or the text will be set and the ad composed at no additional charge.

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John Locke

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VIRGINIA MEDICAL
AUGUST 1978

Medical Self-Care: An Old Remedy Recurs

Keith W. Sehnert, M.D., *Excelsior, Minnesota*

Beginning in the 1960s, Virginia was the site of pioneering efforts in medical self-care education. The author traces the history of this concept, the reasons for its current popularity, and the benefits it can yield to both physicians and patients.

THERE IS rapidly increasing interest in medical self-care in the United States. Some of this interest is based on the hope of containing health care costs. A Commission of the American Medical Association has proposed that such methods be included as options for future medical programs in its precedent-setting "Report from the National Commission on the Cost of Medical Care."[1]

Among laypersons, there exists in America today a growing interest in medical self-care. The reasons for this interest are based on economic, educational, and social factors that have made many people want to assume new roles and greater responsibility for their own health and that of their families. The concept of people helping themselves and seeking solutions to their own medical problems is not a new one. There is historical evidence that it has always been part of the resources of individuals and families.

Dr. Sehnert is author of the best-selling *How to Be Your Own Doctor—Sometimes,* published in 1975 by Grosset and Dunlap, New York. Now associated with InterStudy, a health care services center in Minnesota, he formerly practiced medicine in Reston and Herndon, Virginia, and was on the faculty of Georgetown University. Address correspondence to him at PO Box S, 5715 Christmas Lake Road, Excelsior MN 55331.

A Virginia physician, Dr. John Tennent of Williamsburg, was perhaps the first medical self-care proponent in this country. His book, *Every Man His Own Doctor, or The Poor Planter's Physician,* offered "plain and easy means for persons to cure themselves of all or most of the distempers incident to this climate, and with very little charge."

"Before I mention the cure," wrote Dr. Tennent, "I shall endeavor to describe the symptoms of each distemper, in so plain a manner, that any person may be the master of his own case, if he will but attend carefully to what he feels; otherwise he might mistake his illness and apply an improper remedy."

Tennent wasn't the only early Virginian interested in helping laypersons help themselves. Thomas Jefferson took training as an apothecary—an equivalent of today's physician's assistant—and thought the things he learned about the care of common ills and injuries so important that when he became provost of the University of Virginia he instituted a medical self-help course there that was required for all freshman.[2]

Evidence exists that there was widespread practice of non-professional health care in ancient Greece. Scarborough has observed that the physicians of early Greece were an elite lot whose fees were quite high.[3] Most ordinary citizens could not afford their services, so nearly every city provided a people's cor-

ner in the *agora* (market square). There, laypersons helped other laypersons with common health problems. This activity became very common and eventually even part of Greek law: If it was known that a citizen failed to offer help to the sick (and it was known that that same passerby had the knowledge and experience to help), then a citizen was subject to high fines—even seizure of his property. The Greeks, thus, had a strong motivation to learn and practice health care skills.

In the more recent past, I recall the days of the Great Depression, when most people fended for themselves and their own families for their health care needs. There simply wasn't the money or transportation available for professional help. The tradition was that older, more experienced members of the family provided counsel and help for members who were ill and injured, with an assist from the "doctor book" in the family bookcase.

But with the end of World War II, there was a shift in the role of families regarding home care for common health problems. The decades after the war brought higher spendable incomes, increased availability of health insurance, better communications, all-weather roads, more cars, more doctors and hospitals, and greater dependence on professionals for health care. With a wider variety of better treatment methods and improved diagnostic equipment, plus all the new vaccines and miracle drugs, it was assumed that the doctor should and could solve all the medical problems confronting individuals.

Meanwhile, something unusual was happening regarding medical problems. There was a shift taking place in the major causes of illness and in the disabilities being treated. Prior to that time, the causes were usually "nature's pathogens"—pneumonia, tuberculosis, polio, meningitis, mumps, measles, and other infectious diseases. After that time the major killers were "man-made pathogens"—cigarettes, alcohol, automobiles, guns, air pollution, highly processed foods, and the many other hazards associated with modern life and environment. While the pathogens of earlier times could be controlled by washing the hands, covering the face, practicing good hygiene, using antibiotics, and being immunized, the new killers were not so easily controlled. The new pathogens had one common ingredient: All required "education" (via advertisements) to get started, and, likewise, required education to stop. Education thus became a new and essential resource.

What were these new pathogens? What had happened between the 1940's and the 1970's?

- Nutrition. The percentage of dietary calories derived from fat had increased; consumption of refined carbohydrates was increased; the amount of animal meat in diets was up; salt intake was higher; and diets high in fiber and roughage had become less common.[4-8]
- Physical Fitness. Although millions of Americans were jogging, biking, hiking, and playing tennis, far too many were still unaware of the negative effects of sedentary life. American life involved more and more sedentary work, automobile driving replaced physicial effort, and the TV set encouraged people to spend several hours each day watching—and eating the wares presented through the message, "Consumer stuff thyself."
- Stress. A gradual shift toward urban life, with its complexity and accompanying feelings of anxiety, made stress more common in Americans' lives. Negative stress increased individuals' susceptibility to disease and worsened chronic disease.[9]
- Tobacco Abuse. Even though the US Public Health Service report on smoking and health from the Surgeon General in 1964 caused a marked decrease in smoking among physicians and others, and even though "non-smokers rights" activities increased, smoking remained an immense health problem. Smoking is costing Americans about $20 to $30 billion per year in health care costs.
- Alcohol/Drug Abuse. Alcoholism cost Americans $25 billion in lost work time, accidents, health and welfare expenses, and major psychological and social turmoil for the spouses and children of 9 million alcoholics.[10] When this economic cost is added to that resulting from one-half million heroin addicts; 1 million cocaine users; and 2-3 million chronic users of marijuana, tranquilizers, barbituates, etc., the cost to our society of alcohol/drug abuse becomes mind-boggling.[11]

Moreover, a series of unrelated yet interlinking economic, educational, and social factors began affecting health care: increased cost of health care—especially hospital care; shortages of primary health care professionals (despite major efforts to train more family doctors and more primary care physician extenders); and expensive new technology. When Medicaid, Medicare, and the rush of "alphabet soup" federal programs such as HSA, PSRO, OSHA, and ERISA were added to the real world of health care, it was a new and much more complicated ballgame. Individuals had to become "wiser buyers" and professionals had to be "wiser providers" of health care services.

With the activities and leadership of Ralph Nader in the 60's, the consumer movement began. The war

in Viet Nam helped spawn the counter-culture revolution, and the women's liberation movement spread from Boston and Berkeley throughout the nation. Such events, plus better educated and more sophisticated citizenry in general, gave birth to free clinics and associated anti-establishment, back-to-nature, do-it-yourself attitudes that affected not only "doctoring" but also farming, home and auto repairing, and a multitude of other services. Medical self-care was reborn.

In 1970 a medical self-care course called the Course for Activated Patients (CAP) was started in Herndon, Virginia.[12] It helped participants to:

1. Accept more individual responsibility for their own care and that of their families;
2. Learn skills of observation, description, and handling of common illnesses, injuries, and emergencies;
3. Increase their basic knowledge about health problems; and
4. Learn how to use health care resources, personnel, services, insurance, and medications more economically and appropriately.

The name chosen for this health education effort was based on a term first used by Vernon Wilson, vice-chancellor for health affairs at Vanderbilt University, who said, "Activated patients are persons whose clinical skills and understanding of health are upgraded in order that they can become active participants in their own health care rather than assume the passive role traditionally assigned to them by health care professionals."[13]

Over the eight years since that first course, the experiences gained have been described in the literature.[14,15] A typical course consists of a series of weekly two-hour sessions held over a period of 12 to 16 weeks. Participants meet for presentations on such topics as Your Medicine Chest: Friend or Foe?; Responsibility for Your Own Care; Talking with Your Doctor—Better Communication Pays Off; the Dangers of Eating American Style; Self-Help Skills (taking blood pressure, pulse, and temperature, observing the throat, mouth, ears, and other parts of the body); learning to use clinical algorithms (medical self-help guides that assist laypersons in making more informed decisions about common health problems); and a variety of other suitable topics determined in part by the age and interests of the participants in a course.

All topics presented incorporate these elements in the presentations:

1. **Appropriate use of the health care system.** Topics deal with consumerism as it relates to the health care system, e.g., better use of money for insurance and medications, avoiding ripoffs, establishing more realistic ideas about what the system can deliver, etc.



The author, third from left, teaches two residents of Fellowship House, Reston, Virginia, how to take blood pressure readings at a Course for Activated Patients while the course coordinator, Bernadette Aukward, looks on.

2. **Compliance/health partnership.** Presentations are made regarding medical regimens for common chronic ills such as diabetes, hypertension, and obesity (depending on interests of audience). This is "patient education" with a difference: Instead of the traditional professional orientation, CAP presentations emphasize people-oriented programs and the health partnership necessary for long-term compliance.

3. **Observations/treatment methods.** These how-to sessions emphasize improved skills of observation about common ills and injuries (when? where? what?) Such observations require learning the use of medical equipment and the skills needed to describe and record the vital signs (blood pressure, pulse, temperature, respiration rate) and certain other clinical events. With this information in hand, treatment methods are applied.

4. **Decision making/increased individual responsibility.** All sessions emphasize increased individual responsibility for health-care decisions and actions. The sessions use self-help guides to assist individuals in making observations and appropriate decisions, first with the simple and short-term health problems

and later with more complex and chronic problems. Such a process moves some away from over-dependence on the professional to greater dependence on themselves and their families for many decisions about health and health care.

5. **Health promotion/self-regulation.** The end product of the above elements is what we term "health promotion." It involves use of positive health habits and self-regulation to achieve greater harmony between the body and its external and internal environments.

Each session is taught by a health care professional. The sessions are not a series of discrete health lectures; there are demonstrations, experiments, role playing, field trips, and other similar active involvement. Participants learn to look at health not simply as the absence of disease but as a resource to be wisely used.

Evaluation of results in metropolitan Washington[15] has shown that laypersons can learn a variety of skills traditionally practiced only by professionals, such as monitoring vital signs, making better decisions after observing these vital and other clinical signs, and using the health care system more appropriately.

In addition to serving as the site for pioneering efforts with medical self-care, Virginia also is headquarters for the Health Activation Network, which acts as a clearinghouse for information on courses being taught in about 40 states in the US and two provinces of Canada. Additional information may be obtained by writing Health Activation Network, PO Box 923, Vienna VA 22180.

Medical self-care can be of help in many medical practices, but especially those providing primary care. It can help prevent overloading the primary care system, save the doctor time-wasting phone calls, and enhance the doctor-patient relationship.

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Hypertensive Crisis and Phencyclidine Abuse

M. A. Stratton, PharmD, John M. Witherspoon, MD, and T. Kirtley, MD, *Richmond, Virginia*

This report of a case in Virginia suggests linkage between the abuse of a "street drug" by a young woman and an acute episode of hypertension resulting in coma and blindness. The authors warn of the potential dangers of phencyclidine and describe its mechanisms.

THE DEVELOPMENT of hypertensive crisis associated with the use of illicit drugs has been, until recently, a poorly recognized problem of adolescents and young adults, but in the past few years, several cases of transient hypertension and a case of fatal hypertensive crisis have been reported in association with the use of phencyclidine.[1-3] It is our opinion that the following case report illustrates the potential danger of sustained, severe hypertension resulting from phencyclidine abuse.

Case Report

An 18-year-old white female was admitted to the Medical College of Virginia Hospital with headache, nausea, vomiting, and blurred vision, progressing to marked confusion, blindness, and finally coma over a period of three days. Following a therapeutic abortion five months prior to admission, the patient began to drink heavily, sniff paint thinner and carburetor starting fluid, and to experiment with various "street drugs", including agents thought to contain phencyclidine. About three weeks prior to admission, she had a "hit of acid", taken orally, which was followed by headaches, abdominal pain, anorexia, nausea, and vomiting. The patient experienced some visual blurring but repeated her use of illicit drugs. According to her family, she continued to smoke marijuana and occasionally took pills of unknown content. Approximately three days prior to admission, her symptoms increased markedly; and, on the day of admission, she was found stumbling around her house, falling over furniture and speaking incoherently. On arrival at the hospital, she was at first confused and combative, then unarousable, and finally displayed decorticate posturing. Her blood pressure was 260/160 in both arms, pulse 100 and regular, and respiratory rate of 30. She was afebrile. She had bilateral papilledema and retinal hemorrhages. The neck was supple; the thyroid was not enlarged. The chest was clear. No murmurs or thoracic bruits were heard. Her abdomen was benign. Peripheral pulses were full. She had no focal neurologic findings. The chest X-ray and skull films were normal. The EKG showed a sinus tachycardia. A CAT scan of the cranium with contrast enhancement was normal. A lumbar puncture showed an opening pressure of 210 and the fluid was clear and colorless. CSF cell counts, culture, and cytology were within normal limits. The protein was 80 mgs% and the CSF glucose 178 mgs% at a time the serum glucose was 385 mgs%. The urinalysis revealed numerous RBCs with hyaline and granular casts, 4+ protein, 1+ glucose, and negative ketones. The serum creatinine was 2.7, the BUN 27, hemoglobin 10.2, platelet count 86,000, pro time 12/12, PTT 24/28, and serum fibrinogen 500 mgs%. Serum hap-

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toglobin and free hemoglobin values were normal. Initial arterial blood gases on ambient air showed a PO_2 of 105, PCO_2 16, pH 7.62, and a saturation of 99%. The white count was 24,600 with 84 polys, 10 bands, 3 lymphs, and 3 monos. The remainder of the serum chemistries were unremarkable except for an LDH which was mildly elevated. Subsequent laboratory work revealed a negative Coombs test, negative latex fixation, negative VDRL, ANA negative, cryoglobulins negative, cold agglutinins negative, and normal thyroid function test. The C3 and C4 levels were normal. Urine catecholamine and VMA levels were normal on several occasions. Plasma toxic screen sent at the time of admission was reported to be negative for alcohols, salicylates, barbiturates, Dalmane®, Doriden®, Librium®, Quaalude®, Serax®, and Valium®. Tests for phencyclidine were not performed.

The patient was treated as having encephalopathy secondary to a hypertensive crisis with a nitropresside drip and the addition of small amounts of hydralazine. She was given dexamethasone parenterally for cerebral edema. Her hospital course was a stormy one, marked by respiratory failure requiring intubation, fever, and upper GI bleeding. Her blood pressure averaged 160/110 during the first week of her hospitalization and seemed resistant to therapy. Her EEG remained diffusely abnormal, and when performed with visually evoked responses, revealed that her blindness was due primarily to an optic neuropathy. Slowly the neurologic status began to improve. Her blood pressure stabilized at 140/90 on hydrochlorothiazide 50 mgs bid and hydralazine 25 mgs q6h. After three weeks of intensive medical and psychiatric care, she was discharged to a rehabilitation center for the blind, with some ability to perceive bright light, behavior which was interpreted to be hyperactive and uncooperative, but no other neurologic defects.

Discussion

Phencyclidine hydrochloride, 1-(1-phenylcyclohexyl) piperidine hydrochloride, was developed in the late 1950's as an anesthetic and analgesic agent. The drug was never marketed for clinical use in this country, and its experimental use in humans was totally abandoned in the mid-1960's due to a number of undesirable side effects[4]. The drug is still used today in veterinary medicine under the name of Sernylan®. The majority of phencyclidine found "on the street' is not from legitimate sources but rather from illicit, so-called "basement" laboratories[2]. It is purported to be a compound easily and cheaply synthesized.

The abuse of phencyclidine first appeared in the late 1960's. It has been referred to under a number of pseudonyms, including PeaCe pill, PCP, angel mist, angel dust, hog, rocket fuel, and crystal. Due to the unpleasant and variable nature of its "trips", phencyclidine usage waned. In the past few years, however, this drug has made a startling resurgence in popularity. In 1975 in Detroit, phencyclidine was the single most common drug detected in an emergency overdose screening program[5]. In another study, phencyclidine was detected in 184 of 237 samples of illicit drugs.[6]

The identity of this drug is often loosely concealed as another illicit agent, such as LSD, mescaline, psilocybin, or THC, and sold to the unsuspecting teenager as "acid." Phencyclidine can be taken either orally, intravenously, or as an inhalant, or by insufflation. A common practice is to dust marijuana with the drug.[5] The percentage of phencyclidine in powder form varies from 50-100%. When sold under the name of another illicit drug, the amount of phencyclidine drops to 10-30%.[5]

The pharmacologic effects of phencyclidine are unpredictable. The psychological and physical effects can be of a stimulant or depressant nature depending on the dose, the route of administration, and individual variation. The mental state during the acute intoxication phase ranges from euphoria to frank psychoses. The resulting behavior may mimic psychopathic or schizophrenic disorders. Individuals with a prior history of psychiatric abnormalities seem to be more susceptible to the development of acute psychotic behavior.[7] Other psychiatric manifestations of phencyclidine are more typical of an acute toxic delirium. They include disorientation to time and place, visual hallucinations, and a state of "sensory blockage" in which the patient appears awake but is unresponsive to verbal communication, followed by depression, irritability, and emotional lability.[4,7] These manifestations usually last 24-48 hours but may persist up to several weeks in some patients.[4,8]

The physical manifestations of acute phencyclidine intoxication are widely variable depending on the dosage taken. The following may be seen with low doses: increased respiratory rate and depth; increased or normal body temperature; ptosis or paucity of spontaneous eye movements; vertical, rotary, or horizontal nystagmus; decreased corneal reflex; increased deep tendon reflexes; motor restlessness; muscle rigidity; ataxia; vomiting; and increased salivary and lacrimal secretions.[2,4,9]

In higher doses, the patient may present with the following physical findings: decreased respiratory rate and depth; increased or decreased blood pressure; increased pulse; fever; dysconjugate gaze; horizontal, rotary, or vertical nystagmus; decreased or absent corneal reflex; decreased deep tendon reflexes; opisthotonos; decerebrate rigidity; spontaneous purposeless movements; early or delayed generalized motor seizures possibly leading to fatal status epilepticus; and cardiac arrhythmias.[2,4,9,10] The EEG changes include disappearance of alpha and beta activity followed by diffuse slowing in the occipital, parietal, and temporal areas.[11]

Acute Hypertension.

Many patients exhibit a mild increase in both systolic and diastolic blood pressure after phencyclidine. In a study by Greifestein et al,[12] intravenously administered phencyclidine in a dose of 0.06 mgs/kg produced an increase of approximately 8 mm Hg in systolic and diastolic blood pressure. A dose of 0.25 mgs/kg produced a 26 mm Hg rise in systolic and a 19 mm Hg rise in the diastolic blood pressure. This elevation of pressure could not be attributed to an increased heart rate alone. Ganglionic (hexamethonium) or non-specific adrenergic (1- naphthylmethyl-ethyl-B-bromethylmethylamine) blockade have been reported not to affect this pressor response.[11] However, Ilett et al[13] were able to block the pressor effect of phencyclidine in cats with specific alpha-adrenergic blockage (phenoxybenzamine). They also documented potentiation of the pressor response of phencyclidine with epinephrine and norepinephrine. These observations have led to the hypothesis that the acute pressor effect of phencyclidine is due to direct stimulation of alpha-adrenergic receptors.

Phencyclidine also may exert its pressor effect by affecting peripheral catecholamine stores. This is suggested from the tachyphylaxis to the pressor effect observed in experimental animals when phencyclidine is administered at 15 minute intervals. Such a mechanism is not supported, however, by the observation in dogs that pre-treatment with reserpine does not reduce the pressure response.[13]

Sustained Hypertension.

Although several explanations may apply to the majority of mild and transient hypertensive episodes seen with phencyclidine usage, the question remains as to why our patient exhibited such a prolonged and severe course. In this regard, consideration of the tissue distribution of phencyclidine may be important since, in a study by James and Schnoll,[14] it was noted that phencyclidine in rats has high affinity for lipid-rich tissues. Its persistence in the brain may help to explain some of the prolonged effects seen with this agent. These authors also reported a case of a patient who exhibited hypertension and focal neurological signs severals days after ingestion of phencyclidine; 48 hours after admission, the patient had evidence of phencyclidine in the CSF while none was detectable in the serum or urine. A similar patient was reported by Eastman and Cohen[3] in whom hypertensive crisis continued while phencyclidine was no longer measurable in the serum or urine.

It can be conjectured that phencyclidine may have some central effect on the brain leading to the development of prolonged hypertension.

Treatment.

There is no specific agent capable of antagonizing all of the effects of acute phencyclidine intoxication. Although sodium succinate has been suggested as an antidote, its efficacy has not been adequately substantiated.[7] Treatment consists of adequate hydration and acidification of the urine to facilitate rapid elimination of the drug. Respiratory support may be required. Due to the rapid absorption of this agent from the GI tract, the role of ipecac-induced emesis is not clearly defined. However, recovery of phencyclidine from the stomach has occurred in a fatal overdose, and lavage will be an appropriate measure when the diagnosis is in doubt.[2,4]

The psychological manifestations are best treated by placing the patient in a quiet, non-hostile environment to limit the amount of sensory stimulation.[2] Intravenous diazepam followed by intravenous phenytoin has been effective in the treatment of phencylidine-induced seizures. Diazepam may also be helpful in relieving the motor restlessness, agitation, and confused state.[4] Phenothiazines are not indicated during the acute intoxication phase inasmuch as they may contribute to the confusional state, and they have not been shown to shorten the recovery phase or antagonize the behavioral effects.[15]

With regard to the hypertensive state or its possible delayed development, sympathomimetics should be avoided. Since the hypertension can be delayed, careful, frequent monitoring of blood pressure is essential when phencyclidine intoxication is suspected. Should hypertensive crisis develop, diazoxide has been used successfully.[3] Hydralazine or sodium nitropresside may also be effective, as in the reported case. Given the possible alpha-adrenergic stimulating properties of this agent, one could speculate that use of a specific alpha-adrenergic antagonist such as phentolamine may be effective.

Summary

The possible association of phencyclidine ingestion and hypertensive crisis requires consideration of the potential dangers of this drug and its mechanisms of action. There is no classical pattern of psychological and physical effects of phencyclidine; and given its increasing use in combination with other illicit drugs, the clinical picture may not be recognized or treated appropriately.

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VIRGINIA AUTHORS

Close Monitoring is Essential during Isoniazid Prophylaxis. NUZHET O. ATUK, MD, ANDREW D. HART, MD, and ELLA H. HUNT, RN, *Charlottesville.*

A three-year prospective study during the entire course of preventive therapy with isoniazid (INH) for recently infected hospital employees was undertaken to evaluate the risk of developing INH-related hepatic injury. Results of clinical and laboratory tests at 1,2,6, and 12 months were correlated to ascertain the significance and value of monitoring procedures. Thirty-two (32%) of 100 employees developed elevated SGOT levels: one (1%) patient developed clinical hepatitis in the first month of therapy: four (4%) subjects with SGOT elevations (82-378 units) became clinically symptomatic at one to four months and INH was discontinued; one (1%) individual with minimal increases in serum bilirubin and SGOT levels was symptomatic at eight months and the drug was stopped. Twenty-four (24%) otherwise asymptomatic subjects who developed SGOT elevations (70-480 units) were followed at closer intervals to complete INH therapy without further progression of liver function abnormality. The intervals between the beginning of treatment and the elevation of SGOT levels varied widely, with elevations occurring throughout the 12-month course of isoniazid therapy. South Med J 70:156, 1977.

Total Hip Replacement in the Previously Infected Hip. ROBERT E. MCLAUGHLIN, MD, and JOHN R. ALLEN, MD, *Charlottesville.*

Ten patients with a history of previous hip joint sepsis including one with active tuberculosis of the hip have had total hip replacement using acrylic cement. With duration of follow-up ranging from six months to over three years, all but one have had satisfactory results with no evidence of persistent or recurrent infection. When preceded by thorough evaluation and eradication of hip sepsis, total hip arthroplasty appears to be an acceptable procedure for restoring a functional hip joint in patients with this difficult problem. South Med J 70:573, 1977.

Routine Upper Gastrointestinal Examination in Preoperative Cholecystectomy Patients. JOSEPH T. MULLEN, MD, MICHAEL A. WATTS, MD, and FRANK E. EHRLICH, MD, *Portsmouth.*

The charts of 663 patients who had cholecystectomy were reviewed to determine the usefulness of preoperative radiologic examinations of the upper gastrointestinal tract. In 14% of the patients a positive finding was reported. However, slightly less than half of these findings were confirmed at surgery. Only 2.9% of the patients had a procedure in addition to cholecystectomy. It is felt that routine examination of the upper GI tract is not indicated in the preoperative evaluation of patients with gallbladder disease unless the clinical history is equivocal and one suspects coincidental disease. South Med J 70:553, 1977.

Lymphomatoid Papulosis and Other Pseudomalignancies of the Skin. FLETCHER C. ASKEW, MD, KENNETH E. GREER, MD, and LARRY L. LEGUM, MD, *Charlottesville.*

Lymphomatoid papulosis, keratoacanthoma, juvenile melanoma, and atypical fibroxanthoma are clinically benign yet histologically malignant cutaneous disorders which have been designated as pseudomalignancies of the skin. Other disorders which may be classified as pseudomalignant include angiolymphoid

hyperplasia with eosinophilia, nodular fasciitis, lymphocytoma cutis, actinic reticuloid and, occasionally, insect bites. A patient with lymphomatoid papulosis is reported and the pseudomalignancies of the skin are briefly reviewed. South Med J 70:57, 1977.

Significant Hematuria Secondary to Sickle Cell Trait in a White Family. David B. Crane, MD, Robert H. Hackler, MD, and Lyman M. Fischer, MD, *Richmond.*

A 21-year-old blond white woman was evaluated for recurrent episodes of painless gross hematuria. She was found to have sickle cell trait, and hematologic evaluation made through four generations isolated the trait to the paternal side. South Med J 70:750, 1977.

Trabeculectomy. James G. Ferguson, Jr., MD, and Roderick Macdonald, MD, *Richmond.*

During a one-year period, 31 trabeculectomies were done in 25 patients. Of these procedures, 27 (87%) were done for chronic open angle glaucoma, three (10%) for congenital glaucoma, and one for chronic open angle glaucoma in an aphakic patient. Our overall success rate was 87%. Complications were few: only two of 31 flat anterior chambers persisted postoperatively. Visual acuity dropped significantly (two lines on the Snellen visual acuity chart) in only one patient. South Med J 70:73, 1977.

Osteotomy of the Metatarsals for Pes Cavus. Gwo-Jaw Wang, MD, *Charlottesville,* and Lee W. Shaffer, MD, *Roanoke.*

Described is a surgical procedure for pes cavus which includes multiple osteotomies of the metatarsals, usually combined with Steindler fasciotomy and extensor tenotomy. This method permits the correction of the cavus deformity and preserves the length of the foot without disturbing any joint. A total of 11 patients with 14 procedures have been followed up for an average of more than three years. Results of 12 of the 14 operations were favorable according to the criteria used. South Med J 70:77, 1977.

Translocation, 1/21. James Q. Miller, MD, Kathryn Willson, BA, Mary J. Goldberg, MA, Alexandra Thomas, BA, Madilaine Murad, BA, and Ann Johanson, MD, *Charlottesville.*

Many human chromosome errors are associated with multiple congenital anomalies. Some are frequent or significantly influence genetic counsel. Others are rare and noteworthy primarily as additions to the catalogue of human chromosome defects and the phenotypic anomalies which accompany them. In 1967 a five-year-old girl with I/G chromosome translocation was identified and reported. Only two other instances of similar chromosome abnormalities are recorded in the English medical literature and the clinical information about them is limited. New cytologic technics now allow considerably more precise identification of chromosome status. Clinical evaluation provides useful insight into the physical and mental development in one patient with this almost unique chromosome error. South Med J 70:102, 1977.

Preoperative Diagnosis of Rectal Bleeding in an Adult Using Radioisotope Scan. Robert P. Randolph, MD, Paul J. Kovalcik, MD, and Joseph T. Muller, MD, *Portsmouth.*

A 22-year-old man with burning pain in the lower abdomen and rectal bleeding had a sodium pertechnetate Tc 99m scan. The scan showed an area of uptake in the right lower quadrant which at operation was found to be a Meckel's diverticulum. The ability of ectopic gastric mucosa within a Meckel's diverticulum to concentrate sodium pertechnetate Tc 99m allow for this noninvasive diagnosis of some types of rectal bleeding, especially when the cause has escaped detection by conventional endoscopic and barium contrast examinations. South Med J 70:680, 1977. ■

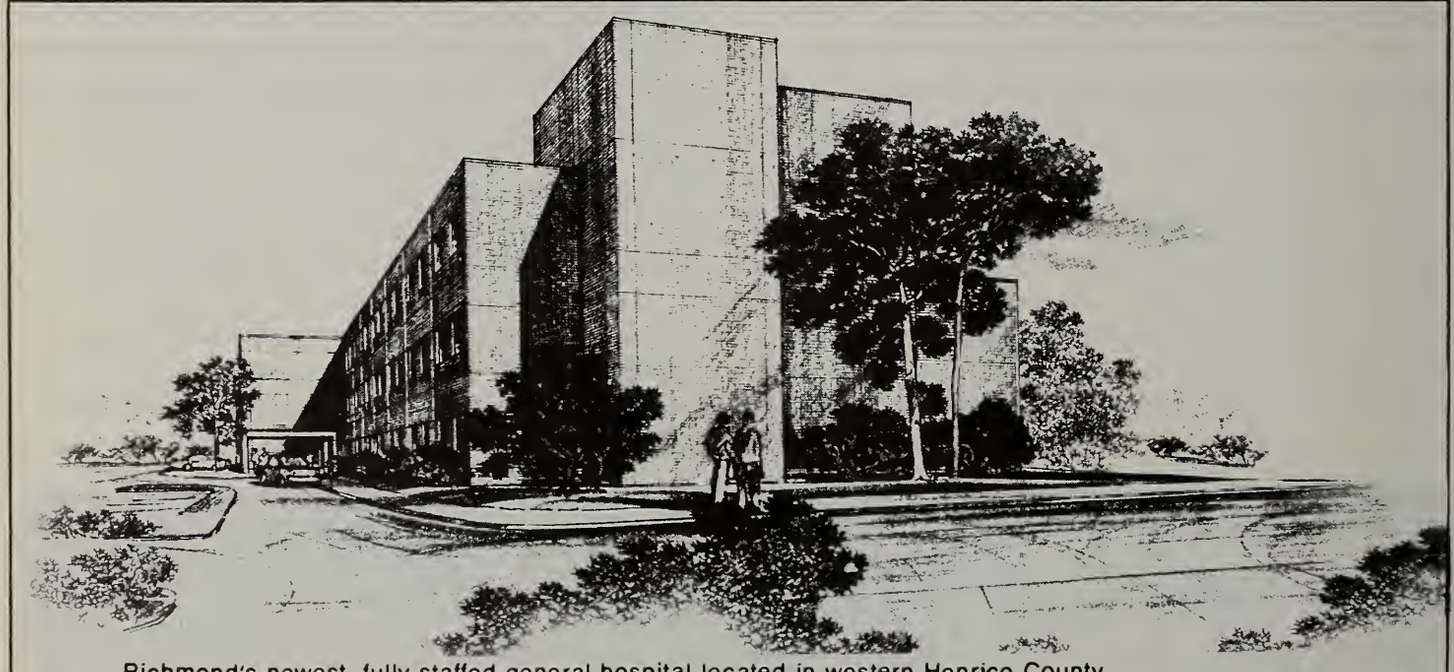
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Ectopic Pregnancy and the Intrauterine Contraceptive Device

Laszlo C. Steingaszner, MD, *Woodbridge, Virginia*

The incidence of ectopic pregnancy is greater among patients with IUD in situ than among women in general. Four cases are reported, and the clinical implications are discussed.

THE INTRAUTERINE contraceptive device (IUD) received worldwide acceptance during the past decade. Its effectiveness closely equals drugs which suppress ovulation, and the majority of associated complications are said to be minor. However, increased attention has been given in recent years to pregnancies occurring in women wearing IUD's at the time of conception.[1] While pregnancy in the presence of an IUD is well recognized, ectopic pregnancy as a major complication is less appreciated.

During the five years from 1972-1977, 24 ectopic pregnancies (three interstitial, 17 tubal, three ovarian and one abdominal) were encountered in this small community hospital. Four of these patients developed ectopic pregnancy (two tubal and two ovarian) following insertion of an IUD.

Case Reports

Case 1.

This 25-year-old gravida 2, para 2 white female presented in 1973 with 10-day history of weakness and pelvic pain. She had an IUD in place of unknown duration. On examination her skin and conjunctivae were pale. The abdomen was very tender and slightly distended, with rebound tenderness in the right lower quadrant. A purulent discharge was noted and the IUD was removed. The uterus was very tender on manipulation. Both adnexa were tender and a 5-cm right adnexal mass was felt. The cul-de-sac was moderately bulging. Laparoscopic examination revealed hemoperitoneum. A laparotomy was performed and about 2000 ml of fresh and clotted blood was removed from the peritoneal cavity. The uterus was of normal size, and the left Fallopian tube and both ovaries were negative. A right salpingectomy was performed for ruptured tubal pregnancy. Her postoperative recovery was uneventful.

Pathology. A 6-cm fusiform segment of right Fallopian tube with patent fimbriae was submitted. The central portion contained a 4×3×2-cm ruptured ectopic pregnancy with placental tissue protruding through the rupture site. No fetus was identified. Microscopic examination revealed placental tissue within the Fallopian tube. Chronic and subacute salpingitis was also present.

Case 2.

This 29-year-old gravida 2, para 2 white female with last menstrual period on March 27, 1975, was admitted on April 24, 1975, with sudden onset of severe lower abdominal pain and vaginal spotting of 15 hours duration. She had worn an IUD for the past 6 years. She was pale and hypotensive. On pelvic examination an IUD was found in place and removed. The lower abdomen was quite tender and the pelvic organs could not be appreciated. Both Pregnosticon Dri-Dot and tube tests (Organon, Inc., West Orange, New Jersey) were positive. On laparoscopic examination, free blood was found in the peritoneal cavity, but the bleeding site could not be adequately visualized. A laparotomy was performed at once. About 1000 ml of free blood was suctioned from the abdominal cavity. The uterus was of normal size. Both Fallopian tubes and right ovary

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were grossly unremarkable. A hemorrhagic mass was attached to the posterior surface of the left ovary. Segmental resection of the left ovary with attached hemorrhagic mass was performed, together with bilateral tubal ligation for sterilization. Except for a brief episode of temperature elevation, her post-operative course was uneventful.

Pathology. A 3.5×3×2.5-cm left ovarian segment was submitted. It contained a 1.5-cm corpus luteum with an attached, well circumscribed hemorrhagic mass 2.5 cm in diameter, which was composed of dark red hemorrhagic tissue with a central amniotic sac containing a 0.9-cm fetus. Microscopic sections revealed ovarian pregnancy adjacent to the corpus luteum. The hemorrhagic mass was composed of chorionic villi with extensive recent hemorrhage and a central amniotic sac containing a small fetus. A thin layer of ovarian cortex partially surrounded the placenta. Segments of Fallopian tubes were histologically unremarkable.

Case 3.

This 34-year-old gravida 2, para 2 white female, developed vaginal bleeding and cramps 1 week prior to admission on March 3, 1975. Her menstrual period was in mid-January 1975. Ultrasound examination revealed a 5-cm mass in the right cul-de-sac. On examination under anesthesia the following day, the uterus was of normal size and an IUD string was in the cervical os. A Lippes loop was removed and a dilatation and curettage performed. A large amount of decidual tissue was obtained. At laparotomy, 200 ml of fresh blood was present in the peritoneal cavity. Exploration revealed an ectopic pregnancy in the mid-portion of the right Fallopian tube. A right salpingectomy was performed. She had an uneventful recovery.

Pathology. The segment of right Fallopian tube measured 5 cm in length with patent fimbriae. The mid-portion was markedly dilated and contained a 2.5-cm cystic structure lined by grayish-pink spongy tissue and filled with clotted blood. Microscopic examination revealed chorionic villi and clotted blood within the dilated portion of the right Fallopian tube. The endometrium showed secretory phase with deciduoid stromal reaction.

Case 4.

This 25-year-old gravida 3, para 3 white female, whose last menstrual period was September 10, 1976, developed intermittent lower abdominal pain for 3 days prior to admission. The pain became more severe on the left side, radiating to the left shoulder. An IUD had been in place for 4 months. Both Pregnosticon Dri-Dot and tube tests were positive. Physical examination revealed vaginal discharge and an IUD string in the cervical os. A Lippes loop was removed. The uterus was slightly enlarged and bilateral adnexal tenderness was present, pronounced on the left. A few hours later her blood pressure dropped and the lower abdominal pain increased. An exploratory laparotomy was performed. About 1000 ml of blood was removed from the abdominal cavity. The uterus, both Fallopian tubes and right ovary were grossly normal. The left ovary was about twice normal size and contained a ruptured hemorrhagic cyst with active bleeding. Left salpingo-oophorectomy was performed. The postoperative recovery was uneventful.

Pathology. The specimen consisted of a grossly unremarkable 4.5-cm segment of Fallopian tube with patent fimbriae. The ovary measured 4×3×2-cm. On cut section, a 1-cm ruptured cyst was attached to the corpus luteum. Microscopic examination revealed ovarian pregnancy with immature chorionic villi invading the corpus luteum. The Fallopian tube was unremarkable.

Discussion

The mode of action of IUD remains unclear. It has been suggested that it acts as a foreign body in the uterus, provoking leukocytic infiltration and resulting in an environment hostile to the implating ovum,[2] or that the tubal transportation of ova is accelerated.[3] The anti-fertility effect may be directly related to the quantity of inflammatory cells and their degradation products, lytic enzymes in the endometrium.[4] Alternatively, a spermatotoxic and blastotoxic agent is produced in response to the IUD which prevents fertilization or implantation in the uterus or tubes, possibly by retrograde flow from the endometrium to the tubes.[5] More recently it was suggested that the IUD alters the ratio of prostaglandins secreted in the uterus and tubes, reversing the peristaltic action of the tubes and carrying the ovum the opposite way.[6] This hypothesis could explain the higher incidence of ovarian and peritoneal pregnancies in IUD wearers. The experience remains that while the IUD reduces uterine implantation by 99.5% and tubal implantation by 95%, the incidence of ovarian pregnancy is not affected.[5]

An unusual complication of IUD was reported by Axelsson et al.[7] They described a case of early intrauterine ectopic pregnancy with rupture of the uterine fundus. A Lippes loop was malpositioned in the uterine cavity. The IUD may have perforated the uterine wall, facilitating the implantation of the ovum in the myometrium.

Whether there is an increased rate of tubal pregnancy associated with an IUD remains unresolved. Statistical data[8] indicate that, while the incidence of ectopic pregnancy is high in relation to the number of pregnancies, it is low in relation to the number expected. Other clinical studies[9,10] indicate that the rate of ectopic pregnancy has been fairly constant through the years, not being influenced by the increasing number of IUD users. In larger series, the incidence of tubal to intrauterine pregnancy with an IUD in situ has been reported to range from 3.4-7.7%.[1,9-12] A total of 17 tubal pregnancies, including a twin tubal pregnancy, were encountered in this series; two of these patients were IUD wearers at the time of conception.

Ovarian pregnancy is rare and occurs about once per 40,000 deliveries. Lehfeld et al[5] collected 19 series

from the literature and obtained an estimate of 0.6% ovarian per 100 ectopic pregnancies. Since first reported by Piver,[13] an increasing number of ovarian pregnancies associated with IUD have been described. Of 76 cases of ovarian pregnancy reported between 1963 and 1973, 13 were associated with IUD, an incidence of 17%.[14] A somewhat lower incidence (11%) was found by Tietze.[8] Fernandez[15] collected from the literature 16 ovarian pregnancies associated with an IUD, adding two cases of his own; thirteen additional case reports,[6,16–22] plus the two cases presented in this paper yield a total of 33. Helde et al[23] believe that ruptured ovarian pregnancy may masquerade as rupture of a corpus luteum with peritoneal hemorrhage, which can be confirmed or ruled out only by careful histologic examination.

The criteria for primary peritoneal pregnancy first described by Studdiford[25] are: 1) that both tubes and ovaries are normal with no evidence of recent pregnancy; 2) the absence of any evidence of a uteroperitoneal fistula; and 3) the presence of a pregnancy related exclusively to the peritoneal surface and young enough to eliminate the possibility of secondary implantation following a primary nidation in the tube. Tisdall et al[25] is credited with the first report of abdominal pregnancy associated with an IUD. A female infant weighing 7 lbs 8 oz. was delivered by laparotomy and lived 6-½ hours. Acker[26] described a case of intra-abdominal pregnancy attached to the omentum; the ectopic gestation was felt to represent not a casusative but an associative correlation with the IUD. Endometriosis in the pouch of Douglas was demonstrated at autopsy at the implanation site in Clark and McMillan's case.[27]

Clinical Considerations

While the IUD is an effective contraceptive device in selected patients, it is not without side effects. Minor complications, i.e., cramping, expulsion, apprehension concerning effectiveness, loss of threads and discomfort to the husband during intercourse, are frequent and well recognized. Hypermenorrhea, intermenstrual or persistent bleeding may abate during the first 3 months following insertion but may lead to major complications, necessitating removal of the device. Other major complications include perforation of the uterus, most frequently during insertion, as well as infection necessitating operative intervention.

Intrauterine pregnancy has been reported in the range of 5.3% within 3 years following first insertion of an IUD.[8] In patients with an IUD in situ, ectopic pregnancy should always be considered. Neither uterine size nor a positive pregnancy test will differentiate ectopic from intrauterine gestation early in the first trimester. For patients with an IUD in situ who desire therapeutic abortion, an operative interruption should be performed and the curettage carefully examined for products of conception. If chorionic villi are not found on pathological examination, an ectopic pregnancy should strongly be considered. If the patient desires to continue her pregnancy, a careful initial examination, removal of the intrauterine device, an ectopic warning and close followup until uterine growth confirms the pregnancy site is considered proper management.[12]

The presence of an IUD may confuse the proper diagnosis and management of ruptured ectopic pregnancy. In a recent clinical study,[9] the correct diagnosis was not made in 75% of patients before surgery. Two maternal deaths due to undiagnosed ruptured ectopic pregnancy in the presence of IUD were reported from Japan,[28] bringing in sharp focus Hallat's contention,[9] that women who wear IUDs are constantly exposed to ectopic pregnancy, which accounts for 6% of all maternal deaths.

X-ray of the abdomen may localize the site of involvement in ovarian pregnancy. In all 3 cases reported by Darwish,[6] the free end of the Lippes loop pointed toward the affected side.

Laparoscopy is a helpful diagnostic tool, although it has pitfalls. In the absence of hemoperitoneum, it may not be possible to differentiate between an early ovarian pregnancy and an ovarian cyst or corpus luteum.[17,22] Therefore, surgical exploration seems indicated in case a positive pregnancy test and adnexal mass is present, especially when intrauterine pregnancy has been ruled out. Wedge or partial resection and repair of ovary is usually sufficient to control bleeding from early ovarian pregnancy.[14,23]

Conclusion

Intrauterine devices undoubtedly play a significant role in preventing conception. The method is particulary useful for women who are unable to use conventional methods or cannot tolerate mechanical devices, oral contraceptives, or surgical sterilization for emotional or physical sequalae. The patient should always be alerted, however, to the fact that ectopic pregnancy may occur with the IUD. And the physician should always have a high index of suspicion of ectopic pregnancy, irrespective of the presence of an intrauterine contraceptive device in situ, if clinical symptoms of progressive or sharp lower abdominal pain, excessive bleeding and a pelvic mass are present.

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The Uses of Myleography in the Diagnosis of Disc Disease

A. R. Coppola, MD, *Newport News, Virginia*

"There are three main advantages in the preoperative myelogram for disc lesions: It confirms the diagnosis of disc lesion, excludes tumor, and defines the exact level of the pathologic lesion."

MEDICAL audit criteria are being rapidly instituted in many hospitals. Too rigid criteria are seldom an improvement over no standards at all. This paper presents the rationale for management of the suspected lumbar disc patient in a community hospital.

Herniation or rupture of a lumbar disc is a frequent cause of back and sciatic pain. Persistence of pain, reflex changes, and a positive straight-leg raising test are indications for myelography. Myelography is not an entirely innocuous procedure and should be reserved for neurosurgical or neuroradiologic confirmation. Arachnoiditis has been frequently attributed to myelography or as a residual of the surgical procedure. Obese patients may be difficult or impossible of myelography and, on occasion, should have the necessary surgery without myelography.

There are three main advantages in the preoperative myelogram for disc lesions: It confirms the diagnosis of a disc lesion, excludes tumor, and defines the exact level of the pathologic lesion. Spinal fluid studies, especially protein determinations, are of very little value in establishing the diagnosis of herniated disc.

Approximately 10% of patients who have a negative myelogram may nonetheless harbor disc pathology, especially at the lumbosacral level, and exploratory surgery may be justified if the patient agrees. Back pain alone, in the absence of neurologic findings, may warrant myelography since the pathologic lesion may exist at higher levels than the more common L4 or L5 disc lesion.

Myelography is of especial aid in the patient who seeks compensation or is involved in litigation. Although the back pain will not disappear in these patients after a negative myelogram, the treating physician can be more assured that he is not overlooking a herniated disc as the cause of the patient's complaints.

Traction is of little value in the treatment of herniated disc, in my opinion, since bed rest will serve equally well. Localization of disc herniation on purely neurologic findings is dangerous at best and many a neurosurgeon without benefit of the preoperative myelogram has had to explore two or more interspaces. In older patients osteophytic spurs or multiple degenerated discs and lumbar spondylosis may require total laminectomy or foraminotomies for relief of symptoms.

Spinal tumors are easily overlooked until late in the disease with onset of paraparesis: pain may be the only early presenting symptom. If the suspicion exists, myelography is highly advisable.

Failure of early diagnosis and surgical treatment of disc herniation is, in my opinion, likely to lead to progressive invalidism, increased neurologic deficit (in central disc herniations, weakness of both legs to

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paraparesis and possible loss of sphincter control) which could prove catastrophic, and lesser chance of surgical benefit.

Hospital stay of postoperative patients should rarely exceed seven days (frequently less) unless there are complications, such as infection, recurrence of disc, postoperative meningocele, or spinal fluid leakage.

Case Reports

Case 1.

A 64-year-old physician had intermittent episodes of chronic back pain over a period of one year. These required a minimum of conservative treatment of occasional bed rest, with no limitation of his daily activities as a busy general practitioner and did not interfere wth his weekly golf. For approximately one month prior to surgery there had been gradual and progressive increase in back discomfort, and one week prior to surgery there developed right hip discomfort, anterior and antero-lateral right thigh pain. Examination revealed only a depressed right patellar reflex and *no* limitation of spine motion with a negative straight leg raising test. A disc herniation was suspected at the L4-L5 level on the right. X-rays of the lumbar spine and vertebral bone scan were negative. Myelography revealed a minimal defect at L4-L5, and because of increased daily leg pain surgery was recommended. At surgery a ruptured disc



Fig. 1. Complete block at the L4-L5 level compatible with extradural lesion, either massive disc herniation or tumor.

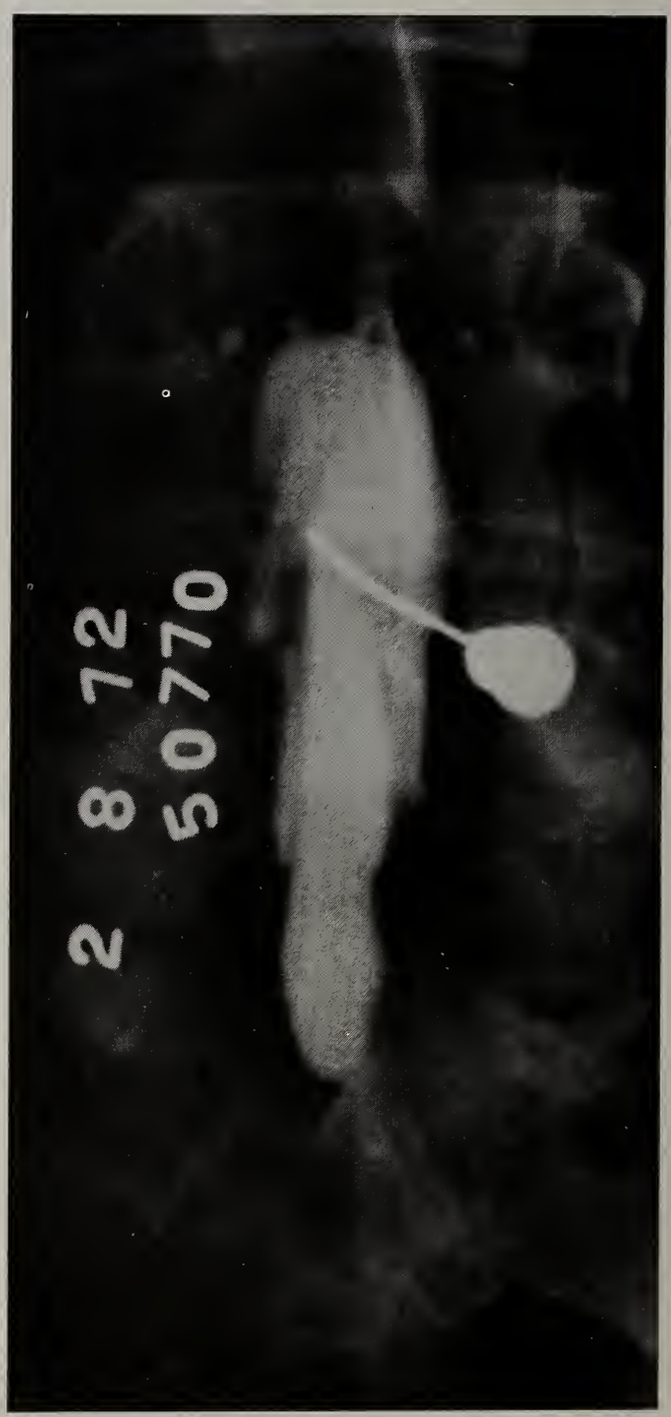


Fig. 2. Extradural defect at the L5-S1 level on the right probably due to disc herniation.

was found with a large extruded fragment adherent to the nerve root.

Case 2.

A 28-year-old housewife had an attack of low back discomfort 4 years previously. She stated that a urinary tract infection was discovered and treated with antibiotics with subsidence of the back pain within a 2-week period. One month prior to admission she was squatting on the floor playing with a cat and as she arose she had a sudden "snap" in her back so that she had to be helped to bed. The back pain gradually eased over the next several days but recurred violently 3 days prior to admission with pain going into the right lower extremity. The leg pain was poorly described by the patient but seemed mainly confined to the right anterior thigh. Neurologic examination revealed only bilateral limitation of straight leg raising, especially on the right. Sensory, motor, and reflex examination was unimpaired. Myelography revealed a complete block of pantopaque in the upright position at the L4-L5 level (Fig. 1); after a few moments pantopaque would "trickle" along the left lateral aspect below the lesion. CSF protein was 55 mgm% (40 mgm% = normal). At surgery a large ruptured disc massively engaging the cauda equina centrally was found and easily removed by a right hemilaminectomy approach.



Fig. 3. Massive extradural defect on the oblique myelographic view at the L5-S1 level probably due to ruptured disc.

Case 3.

A 38-year-old engineer was operated on for a herniated (not ruptured) disc 3 years previously (Fig. 2). He made an excellent and uneventful recovery until 6 months prior to admission when he stepped awkwardly into a hole and back pain recurred. This was never severe but gradually became more constant for a month prior to admission. One week prior to surgery he arose from the breakfast table, experienced sudden excruciating back pain and required assistance to reach his bed. The following day he complained of excruciating sudden "spasms" in his back muscles and right leg occurring in the sitting position, walking, or coming on occasionally at rest. He required large doses of narcotics for his pain. Straight-leg raising was markedly positive on the right and right Achilles reflex was absent (probably the residual of previous surgery). At surgical exploration several large extruded disc fragments were removed from the spinal canal beneath the nerve root at L5-S1.

Case 4.

A 35-year-old electrician presented with a painless right foot drop of 2-weeks duration. There was no history of trauma, infection, toxic agents, or diabetes, and patient denied any back or hip pain at any time. The only reason he presented to a physician was that he noted his foot tended to "slap" when he walked and that he could not elevate his right foot. Electromyography suggested a nerve root lesion and pantopaque myelography was suggestive of disc herniation or tumor (Fig. 3). Operation revealed the entire disc substance extruded into the lateral spinal canal with compression of the never root and cauda equina.

Conclusion

Myelography after one or more surgical procedures is rarely of significant diagnostic assistance since it is impossible to distinguish epidural cicatrix formation from disc recurrence, and on occasion, both conditions will be found to co-exist at the time of surgery. The neurosurgeon should be given latitude to determine that 1) myelography is or is not advisable or necessary; 2) surgical exploration for disc is to be carried out without benefit of myelography, 3) conservative and nonsurgical therapy is best indicated, in his judgment, and whether this can be satisfactorily carried out at home or in hospital.

Back Pain Of Organic and Psychogenic Etiology

Jonathan G. Solomon, MD, *Hampton, Virginia*

Citing the case of a patient with lumbar disc disease, the author shows how a psychiatrist can make an important contribution to multidisciplinary patient care.

THIS communication is prompted by a consultation at a general hospital involving a man with lumbar disc disease and chronic pain. After a severe exacerbation of symptoms that persisted for six months without responding to treatment, a psychiatric consultation was arranged, and a psychogenic component not previously recognized was revealed.

Case Report.

The patient was a 60-year-old white married man with low back pain treated conservatively for three decades prior to surgery in 1967 to remove a large ruptured disc at the L4-5 interspace. Re-exploration of the same area in 1968 was done, and free fragment material was removed. As with the previous surgery, there was relief of symptoms for several months. In 1970 a posterior rhizotomy was done; following this, the patient's back pains persisted but were less severe. In 1972 he retired with 100% disability because he was unable to stand on his feet all day at his job. The following year he suffered a coronary, but despite his medical problems he felt reasonably well and kept busy with his hobbies. There was no history of psychiatric consultation.

In January 1977 the patient sustained a severe and unremitting bout of back pain, made frequent calls to his doctors, required meperidine hydrochloride (Demerol) for relief of pain, went to the emergency room at all hours for "shots for pain," and was admitted to the hospital twice for evaluation and treatment. On hospitalization, physical findings were minimal, and no organic cause was demonstrated to account for his symptoms. Conservative therapy included traction, muscle relaxers, heat and whirlpool bath but was not helpful. In view of his six-month exacerbation of symptoms and poor response to therapy which had helped previously, psychiatric consultation was requested.

Psychiatric evaluation revealed a man lying in bed and appearing markedly older than his stated 60 years. He was alert, friendly, lucid and cooperative. He felt anxious but not depressed. Intelligence was average and thought processes were obsessional. Thought content involved his unexplained back pain. Judgment was intact but insight was poor.

When asked about his life circumstances at the onset of symptoms, he noted some concern about his son's financial reverses, and as he talked he realized he was more concerned about them than he'd realized previously. Then he revealed an unusual family situation: The patient had for ten years reared a grandson, the child of one of his daughters. The year previously, another daughter had married unexpectedly, and in December she and her husband had adopted this grandson. Consciously, the patient experienced the adoption as a "Christmas present", because the child would have more normal parentage; but as he discussed his feelings, the focus shifted from "a blessing for the child" to feelings of personal loss in relinquishing custody of his grandchild.

The attending physician was advised that the pains were psychogenic and stress-related; psychological testing confirmed the clinical impression of psychogenic pain second-

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Submitted 12-1-77.

ary to personal stress. Recommendations for management included: 1) chlordiazepoxide 25 mg bid prn to treat the anxiety; 2) avoid opiates and downplay pain-relieving medications; 3) avoid tricyclic antidepressants because they can be cardiotoxic, and this patient should benefit more from psychotherapy than pharmacotherapy; 4) arrange psychotherapy visits.

Following the single consultation the patient's condition improved dramatically. His pains were much less severe, and he stopped calling his doctor and visiting the emergency room for pain-relieving drugs. His mood improved, and he felt more cheerful than he had in months. Unfortunately he did not arrange office visits and was lost to followup.

Discussion

This case exhibits a psychogenic overlay superimposed on an organic process. The patient had chronic back pain with an unexplained exacerbation that defied satisfactory medical management. His physician ruled out other organic pathology and consulted with various specialists, then attempted conservative therapy, which failed to help, and finally requested psychiatric evaluation to assess a "functional" component in this case of unexplained pains not responsive to treatment.

By persistent questioning the psychiatrist elucidated two areas of the patient's life that caused great stress. Although the patient was coping well intellectually with his son's financial troubles and his loss of the grandchild, he was surprised at the depth of emotional feelings which he had repressed.

Several authors[1-3] welcome the return of psychiatrists to general hospitals and feel that psychiatrists offer much to physicians and their patients. With his familiarity with the behavioral manifestations of functional and organic illnesses and the importance of psychosocial and personal factors in symptom-formation[4], the psychiatrist can often help in the differential diagnosis of patients with physical symptoms whose organic etiology is obscure. As in the case reported, such patients often benefit from psychiatric attention and are less likely to over-utilize medical and surgical facilities[5,6], resulting in a more effective utilization of available health care resources and reducing their financial cost.

Lipowski[7] surveys consultation-liaison psychiatry and states that the psychiatrist's most important contribution is his participation in an integrated, multidisciplinary approach to patient care. Besides functioning in a liaision capacity between various medical specialties, a knowledge of psychopharmacology is crucial.

Finally, consultation proves on occasion to be not only of diagnostic value to the physician but of marked therapeutic benefit to the patient.

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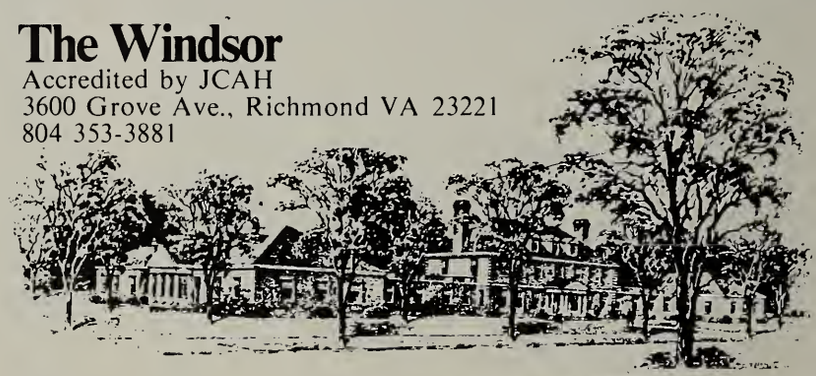
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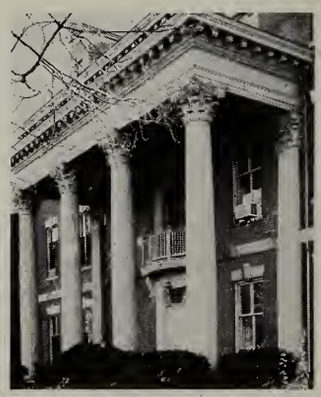
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BOOKS

The Care and Management of the Sick and Incompetent Physician. ROBERT C. GREEN, JR., MD, GEORGE J. CARROLL, MD, and WILLIAM D. BUXTON, MD. Springfield, Illinois, Charles C. Thomas, 1978, 101 pages.

The title and the appearance of this book should excite the attention of the medical profession not only in the state of Virginia but elsewhere as well. It also should rate high priority reading material for all medical students.

I agree with Dr. Howard Rome, the noted psychiatrist, that the information collected by Doctors Carroll, Green and Buxton splendidly defines the many problems of physicians whose incompetence is of great concern.

As the authors note, there has been a growing demand for professional discipline since the end of World War II. Two trends, the authors point out, have had a profound effect on physician-patient relationships and on the incidence of problem physicians in the latter half of this 20th century. First is the increase in specialization and sub-specialization, and second is a major move toward group practice.

The authors ably point out that maintaining professional competence is a must, and continuing medical education seems to appear to have an important place in maintaining professional competence.

The two chapters discussing drug-addicted physicians and alcoholism among physicians aptly point out that these two debilitating conditions have lowered the esteem of the medical profession as much, or more, than any other problem among physicians. They describe the early symptoms as well as rehabilitating procedures for physicians with these problems. They point out that prognosis in alcoholism and drug addiction is not always poor if proper treatment and rehabilitation is followed.

The discussion of psychiatric illness among physicians alludes to the fact that physicians are no more immune from psychiatric disorders than from physical illness and that there is some thought that psychiatric problems among the medical profession are more prominent than in other professions or even in the general population.

According to the authors, from 1967 to 1976 the Virginia State Board of Medicine identified 21 physicians with "psychiatric disorders". During this 10-year period, the number of doctors licensed to practice in the state averaged 5,600. The 21 physicians thus represented only 0.38 per cent of their colleagues.

I agree that the Virginia State Board of Medicine is entitled to have an adequate profile of each individual licensed to practice medicine in the State of Virginia, but I think the Board was wise to eliminate the licensure question asking if the candidate had ever received psychotherapy.

Several states, according to the authors, now have statutes requiring that physicians who are under psychiatric treatment be reported to their state Boards. The reporting requirement will be controversial, no doubt, as it may lead physicians to avoid treatment or to seek out-of-state treatment to avoid detection. All of this adds up to the necessity for careful and tactful handling of psychiatric problems by the Virginia State Board of Medicine. With this in mind, the Virginia State Board of Medicine in 1967 appointed three psychiatrists as its advisors and consultants.

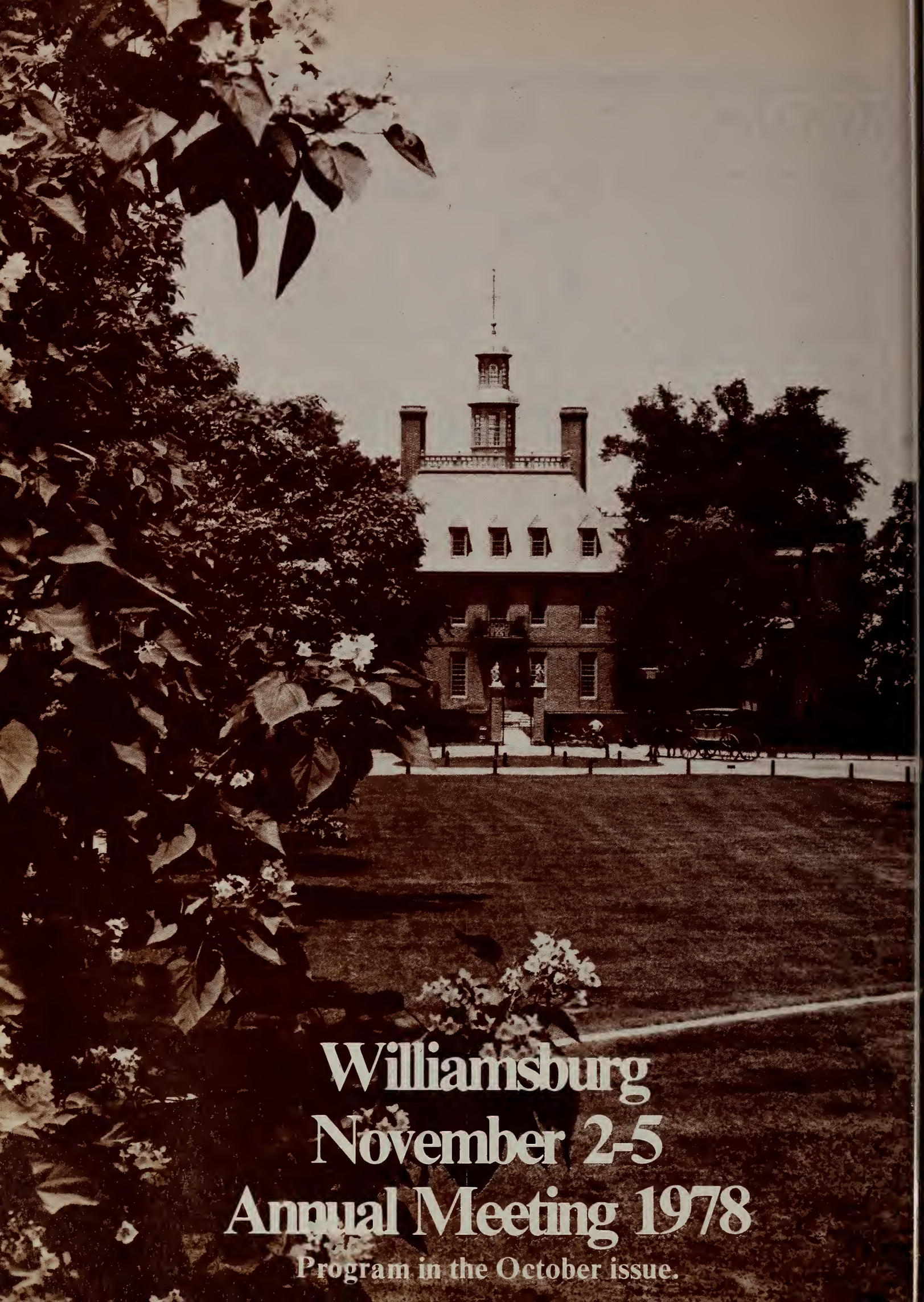
With drastic changes in the type of medicine practiced, behavioral problems among physicians has greatly increased during the past decade, as the authors point out. The Virginia State Board of Medicine has wisely sought help from many sources, among them the Virginia Board of Pharmacy. These two bodies working together have proven quite effective in protecting the public from the sick and incompetent physician.

It should not be forgotten, of course, that the sick or incompetent physician has his legal rights. They are described in this monograph.

The chapter titled "The Virginia Experience" reveals quite clearly that the Virginia State Board of Medicine has kept abreast of the times and undoubtedly has surpassed many other states with its scientific and up-to-date methods in "policing" the medical profession as well as establishing a balanced and scientific approach for the rehabilitation of the sick and incompetent physician.

The medical profession and the public should be grateful to the authors of *The Care and Management of the Sick and Incompetent Physician* for giving us such a well-written and comprehensive monograph.

JOHN R. SAUNDERS, MD



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Program in the October issue.

VIRGINIA MEDICAL
EDITORIAL

Pruritis Regularis

That government is best that governs least.
Thomas Jefferson

IT WOULD have been well, I think, for Mr. Jefferson to have buttressed the above pronouncement by the three words, "but governs wisely."

Regulations are fundamental to the orderly function of the universe and all it embodies. However, the orderliness of function of any regulation is subject to distortion or finagling. Such reference as I propose to make apropos regulations will, in the main, pertain to their relationships to the profession of medicine.

Following the release, in 1910, of a report and recommendations of a commission chaired by Abraham Flexner—not himself an MD—an aspirant to the practice of medicine and surgery needed to begin with a diploma, almost exclusively from a "Class A" medical school, and a certificate attesting that he or she had passed a State Board, either before, or after, they had served an internship of no less than a year, in a hospital approved by a special section of the American Medical Association. (The National Board of Medical Examiners required that an interneship be served before a candidate became eligible for Part 3 of that Board).

Then the neophyte doctor was free to specialize in whatever respect and to whatever extent his fancy led him. He was also free to join professional societies, to attend and participate in medical meetings, and to continue to enhance his professional education and skill by capitalizing upon a number of opportunities and reading an ever-increasing volume of medical literature.

When the American College of Surgeons and the American College of Physicians were formed more than 50 years ago, most doctors, I believe, aspired to becoming a fellow in one or the other of these colleges. Then, as the years passed, the specialty boards burgeoned; their purpose was undoubtedly salutary to a certain degree, but their advent brought "pruritis regularis"—an itch to regulate. This condition, fortunately, could be dealt with without too much difficulty, so long as it remained within the domain of the profession of medicine.

If the specialty boards could be charged with a fault, it was, first, the fault of multiplicity on the one hand, with "pruritis regularis" on the part of board organizers constituting a dominant annoyance; and, second, a refusal on the part of the board designers to create at least one specialty board that could have served as a welcome pacifier in the ranks of doctors called upon to serve the needs of the armed services. The hue and cry of these captive doctors was: "I want to get out and get my boards off." Well, inasmuch as the Surgeons General were the recipients of this clamor over board certification, it was my recommendation that a Board of Military Medicine be created. This, to an appreciable extent, I believe, would have served to placate those disturbed over board certification. They would have been certified by a board for which their civilian counterparts would have been ineligible. It has for long been my conviction that military medicine is sufficiently unique in its requirements, sufficiently distinct in its mission, and sufficiently meritorious through its achievements to warrant being considered a specialty *sui generis* and accorded such special recognition as would be inherent in its own specialty board. This I continue to consider a bona fide concept, the existence of too many splinter groups notwithstanding.

When one cogitates upon the state of unrest, consternation and dissension that has come to obtain between the profession of medicine and the federal government of our nation, he may well find himself

on the horns of a dilemma. On the one hand he may be disposed to reflect upon the contributions the federal government has made to the health interests of this nation, at the same time forgetting how often what appeared to be governmental beneficence has actually been the fruits of professional devotion and tremendous expenditure of energy—and sometimes, self-sacrifice—by a single individual or small group of individuals, some military, some civilians.

The Panama Canal is a monument to Walter Reed and William Crawford Gorgas, both doctors in the US Army. To avoid appearing biased to the military, I would choose from the ranks of distinguished American doctors Dr. Benjamin Rush and Dr. Harvey Wiley.

The Pure Food and Drug Act signed by President Theodore Roosevelt on 30 June 1906 is a monumental example of a piece of legislation driven to passage by a single individual. Between 1880 and 1906, 103 bills bearing upon the matter of food and drug adulteration and a melange of faults relative to food and drugs were introduced before the US Congress. One individual was, far and away, chiefly responsible for the passage of this supremely important law. His name was Harvey Washington Wiley, MD. And it wasn't the law that dictated the actions of Benjamin Rush, Walter Reed, William Gorgas or Harvey Wiley. It was Doctor Wiley who cracked the whip over the law-making branch of the federal government that finally resulted in the realization of his objective. Thus, for example, he stopped unscrupulous producers from adulterating canned applebutter by the addition of 20% brick dust. Similarly, history attests that virtually all of the great health contributions made to people the world over have been made by individuals or groups of individuals free from governmental prodding.

Until relatively recent years there was not a great deal of meddling by "big government" with the practice of medicine in the United States. "Pruritis regularis" remained comparatively benign—comparatively, i.e., relative to what was to come later.

It was, in fact, not until quite promptly after the close of World War II that, in response to invitations from crystal gazers in extra-medical high office, a rash of self-ordained, organizational medicine experts descended upon Washington. In the wake of the war and reactionary to so major a socioeconomical upheaval, readjustments were considered inevitable. Committees ad hoc and ad nauseam came to dominate the medical firmament and the federal government began forthrightly to assume an increasingly dictatorial attitude toward the profession of medicine. This manifestation by the federal government of interest in the health care of both civilian and military personnel was not resented by doctors by and large. What was resented was a "pruritis regularis" which by this time had reached a form, grade or degree of malignant propensities; and by no means strictly responded to by the federal government's electorate but by unelected underlings who, as rank amateurs, presumed to tell professionals how to run their business—a state of affairs far more conducive to chaos than to order.

During World War II a travesty upon excessive and unprofessional mismanagement was penned by an unknown author; the situation today would appear to be no less snafu than it was 30 years ago. One stanza of that buffoonery ran as follows: "First they sent a checker and then a checker's checker; still nothing much was disclosed as being wrong. So, then they sent a checker's checker's checker to check the checker's checker's checker's checker and the process was laborious and long." Apparently this kind of falderal has endured.

From the Council halls of medicine's standard bearers today come cries of protest over the staggeringly excessive regulations emanating from the Federal Trade Commission, the Federal Power Commission, the Occupational Safety and Health Administration, the Aviation Administration, the Environmental Protection Agency, the National Academy of Sciences, the Federal Energy Administration, the National Research Council, the Federal Drug Administration, Health Education and Welfare, the Professional Standards Review Organization, and many other pseudo-expert or quasi-judicial regulators that have come to plague a once highly regarded and freewheeling profession.

It seems to me that certain facets of this situation may have stemmed in part from a predilection on the part of industry and medicine alike for soliciting governmental aid in an assortment of predicaments that should never have been permitted to become problems of the federal government.

There is no profession more difficult, indeed impossible, to regiment than the medical profession. Doctor Osler, one of the all-time great disciples of Hippocrates, declared that "the practice of medicine is an art, not a trade; a calling, not a business; a calling in which the practitioner's heart will be exercised along with his head."

The profession of medicine is today where the thoughts and efforts of its proponents have brought it. It will be tomorrow where the thoughts and efforts of its devotees will take it. "That government is best that governs least." And, insofar as the profession of medicine is concerned, becomes immune to "pruritis regularis."

H. Lamont Pugh, MD

VIRGINIA MEDICAL OBITUARY

Herbert C. Lee, MD

Dr. Herbert Carl Lee, 67, retired professor of surgery at the Medical College of Virginia, died June 26 at his home in Richmond. Dr. Lee, who was associated with MCV for 40 years, was professor of surgery from 1964 until his retirement in 1976. He had been chairman of the medical records committee at MCV for 29 years and of the infections committee for eight years.

A native of Madison, Wisconsin, Dr. Lee received his bachelor of arts degree in 1932 and his medical degree in 1935 from the University of Wisconsin. Both his internship and residency were served at the Medical College of Virginia.

A former trustee of the Medical College of Virginia Foundation, Dr. Lee was a diplomate of the American Board of Surgery and a life member of the American College of Surgeons. His membership in The Medical College of Virginia spanned 37 years and he belonged also to these organizations: the American and Southern Medical Associations, the Southern Surgical Association, the Southern Society of Clinical Surgeons, the Virginia Surgical Society, the Richmond Academy of Medicine, the Richmond Surgical and Gynecological Society, the American Associations of University Professors and the American Association for the Advancement of Science.

Albert H. Bond, MD

Dr. Albert Haskell Bond died April 24 at the Park Avenue Hospital in Norton, Virginia. He was 69 years old. A general practitioner, Dr. Bond was a graduate of the University of Louisville School of Medicine. He had been a member of The Medical Society of Virginia 27 years and belonged also to the American Academy of Family Physicians.

A. C. Whitley, MD

Dr. Ayer Crouch Whitley, general practitioner and former coroner for Fluvanna County, died June 24 at his home in Palmyra, Virginia. He was 69.

A native of Mint Hill, North Carolina, Dr. Whitley was graduated from the University of North Carolina, then earned his medical degree at the Medical College of Virginia. He served with the US Army in the Pacific during World War II and was awarded the Bronze Star and Purple Heart.

Dr. Whitley had been a member of The Medical Society of Virginia for 29 years and was a member also of the American and Southern Medical Associations, the James River Medical Society, the Albemarle Medical Association, and the American Academy of Family Practice, which named him a charter fellow in 1974.

James A. Thompson, Jr., MD

Dr. James A. Thompson, Jr., died at his home in Marion, Virginia, on May 6 at the age of 60. A general practitioner, Dr. Thompson was a graduate of the Medical College of Virginia and had been a member of The Medical Society of Virginia more than 25 years.

Memoir of Charles C. Powel 1915-1978

By Robert M. McDonald, MD, F. Edward Comer, MD, and H. Grant Preston, MD

Charles Calhoun Powel, MD, pediatrician of Harrisonburg, Virginia, died of acute coronary thrombosis at his home on April 5, 1978.

For 36 years Dr. Powel served, at all hours, many children and their parents in the city, county and greater Harrisonburg area. He was a man of great good will, unfailing geniality, and quiet intelligence. His education had prepared him to be a sympathetic as well as knowledgeable and capable physician. He was a graduate of the University of Chattanooga in Tennessee and Emory University Medical School in Atlanta, Georgia. He served a pediatric residency at Grady Hospital in Atlanta.

He served terms as president of the Rockingham County Medical Society, the Rockingham Hospital Staff and the Virginia Pediatric Society. He also was a member of The Medical Society of Virginia and the Southern Medical Association, was a diplomat of the American Board of Pediatrics and a fellow of the American Acadamey of Pediatrics. His wide range of professional memberships reflect his keen interest in maintaining high quality medical and pediatric care.

He was instrumental in planning and developing the present pediatric department and remodeling and updating the nursery at Rockingham Memorial Hos-

pital. In addition, he helped organize and for several years served as medical director of the local Poison Control Center.

Dr. Powel was an active participant in civic and community development. He served as a deacon in the First Presbyterian Church, was a member of the City School Board for six years, a member of the City Recreation Commission, and on the Selective Service Board. In 1961, he received the Pop Warner Distinguished Achievement Award for services to youth. This was, in part, recognition for his work as team physician for Harrisonburg High athletic teams and the Midget Football program.

He was a humble and gentle man, beloved and respected by his family, patients and fellow physicians, who will be missed by all who knew him affectionately as "Charlie" or "Uncle Charlie".

Prepared and published at the request of the Rockingham County Medical Society.

Memoir of A. W. D. Mears 1923-1977

Dr. Arthur Wainhouse Downing Mears, age 54, died at his home in Belle Haven, Virginia, November 12, 1977. He had recovered from a coronary, suffered earlier in the year, and had returned to his active family practice at the time of his unexpected death.

Born and reared in Belle Haven, Dr. Mears was graduated from Hampden Sydney College, served in the US Navy during World War II and later attended the college of William and Mary. He received his medical degree from the Medical College of Virginia and returned to his home town where he conducted a family practice for 25 years.

Dr. Mears was a member of Christ Episcopal Church, Kappa Alpha fraternity, Chi Phi medical fraternity, the Accomack County Medical Society and The Medical Society of Virginia. He was on the active staff of the Northampton-Accomack Memorial Hospital and was serving on the board of trustees of that hospital at the time of his death.

Although always available to his patients, Dr. Mears found time to enjoy roses from his garden and a collection of Canton china. The love and respect that the community had for "Dr. Wayne" was evident in the attendance at his funeral by the masses of people from all walks of life, all ages and all races. He will be missed by his patients and professional associates.

Prepared and published at the request of the Accomack County Medical Society.

Memoir of W. O. Poindexter 1893-1978

William Overton Poindexter, MD, was born on the ancestral homestead at Goode, Bedford County, Virginia, February 26, 1893. He attended Virginia Christian College at Lynchburg for one year and graduated from Randolph-Macon College in 1912. He received the degree of Doctor of Medicine from the Medical College of Virginia in 1916, serving as class president. He spent one year at the Philadelphia Orthopedic Hospital and Infirmary before opening his practice in Radford, Virginia, where he remained until he enlisted in the First Virginia Hospital, was commissioned a first lieutenant, and served in the AEF in France as a batallion surgeon in the 115th Infantry.

Following discharge from military service in 1919, Dr. Poindexter took postgraduate training in New York City and opened his office in Newport News that same year, doing a general practice which encompassed surgery and urology.

Staff affiliations were with the Elizabeth Buxton and Riverside Hospitals in Newport News, practicing for almost 60 years.

An active Kiwanian, he served as director of the Newport News chapter, and was a member of the Orcutt Avenue Baptist Church. He was a charter member of the James River Country Club. Third-generation members of families were numbered among his many patients in his latter years of practice.

Memberships were held in the Newport News Medical Society, The Medical Society of Virginia, AMA, AMA-SE Surgeons, and American Academy of Surgery.

Dr. Poindexter died February 8, 1978, a few days short of his 85th birthday, having been engaged in active practice until a few weeks of his demise.

Prepared and published at the request of the Newport News Medical Society.

Erratum

The management of this journal profoundly regrets some erroneous page numbers in the index for the July issue. Very late in the print procedure, the printer asked to change the numeric sequence in the second half of the issue, to conform to a postal regulation, and the index was not changed to suit. This was an annoying error, for authors and readers alike, and we earnestly beg your pardon.

WHO'S WHO IN VIRGINIA MEDICINE

Dr. George J. Carroll, *Suffolk,* has been on the presenting end of the annual Louise Obici Memorial Hospital award ever since it was established 13 years ago. This year the awards committee ordered Dr. Carroll to leave the room when it came time to vote and unanimously elected him to the receiving end.

So it was that at the Hospital's 25th annual clinical conference this spring the photographer recorded the scene shown on this page, with Dr. Carroll smiling broadly as he received the plaque.

The award is conferred for outstanding contributions to the medical profession, and Dr. Carroll fits that accolade admirably. Chief pathologist not only at Louise Obici Memorial but at hospitals in Franklin and Emporia, Dr. Carroll is known throughout Virginia as secretary-treasurer of the State Board of Medicine. Both the Southern Medical Association and the American Society of Clinical Pathologists have elected him president. At the Medical College of Virginia he is clinical professor of medicine and at Eastern Virginia Medical School, professor of pathology. An accomplished writer, he co-authored "The Care and Management of the Sick and Incompetent Physician," published this year and reviewed on page 589 of this issue.

And for 25 years Dr. Carroll has energized, as chairman, the annual clinical conference of the Louise Obici Memorial Hospital. This year more than 175 Virginia physicians gathered in Suffolk's Shrine Club to hear these doctors discuss current topics in gastroenterology: Dr. **Edward C. Wilson,** *Charlottesville*; Drs. Daniel H. Gregory and Donald M. Switz, *Richmond*; and Drs. Donald A. O'Kieffe and Hyman J. Zimmerman, *Washington DC.* The program was moderated by Dr. **Charles M. Caravati, Sr.,** *Richmond,* who was the first recipient of the award in 1965, and former Gov. Mills E. Godwin, Jr., was the luncheon speaker.

According to one physician who was there, it was "one of the best seminars I've ever heard anywhere." No wonder, with George Carroll at the helm.

Dr. **Lawrence A. Gaydos,** *Arlington*, is the new president of the Arlington County Medical Society. Elected with him were Drs. **Charles E. Hannan**, president-elect; **Herbert G. Hopwood, Jr.**, vice-president; **Charles L. Rickerich**, secretary; **Robert M. White**, treasurer; and **Robert P. Nirschl**, member-at-large.

Dr. **Frank S. Royal,** *Richmond*, was appointed recently by Gov. John N. Dalton to the board of visitors of the University of Virginia. Reappointed to the board was Dr. **DuPont Guerry III,** *Richmond.*

The Virginia State Board of Medicine has appointed Dr. **A. C. Wagner,** *Warrenton,* to serve as a member of the medical malpractice review panel.

Dr. **Robert G. Kendall,** *Winchester*, recently was elected president of the medical staff of Winchester Memorial Hospital.

A picture and biographical story of Dr. **A. Warren Rucker,** *Standardsville,* appeared in a recent edition of the *Greene County Record* in tribute to his retirement early this year. The caption with the picture praised his two decades of practice in the area and stated that, although retired, "he will not be forgotten by the friends and neighbors who grew to love and respect him while he was their family physician." Dr. Rucker, 78 years old, is a general practitioner with a diploma from the Vanderbilt University School of Medicine.



Dr. George J. Carroll (left) receives the Louise Obici Memorial Hospital medical staff award from Dr. James M. Habel, Jr., representing the staff.

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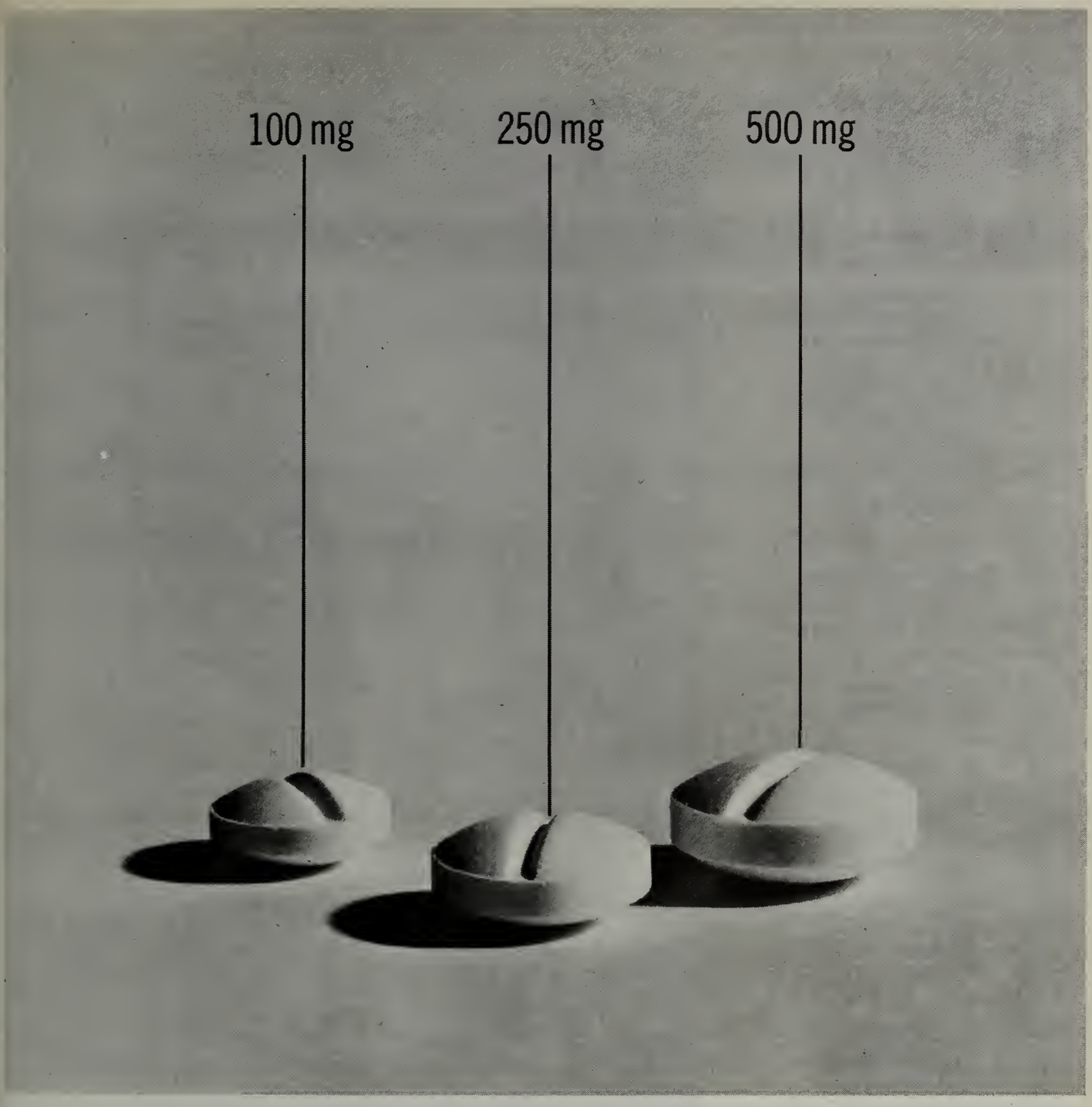
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From the President: How to Participate

DURING the past year one of my major concerns has been trying to answer the question of how a large professional organization can best fulfill the many diverse needs of its members with specific programs and services.

As you may know, the Society is active in many fields. On a regular basis, it offers services relating to insurance, legislation, continuing medical education, and many other broad areas of need. When a specific service is not supplied by the Society, its administrative staff is able to steer members toward a person or group with the information the member needs. The Society's services are even more remarkable when one considers, first, that our annual dues are the third lowest of all state organizations in the AMA federation, and, second, that even the most generous observer would estimate that our members' direct involvement, even though improving, remains low.

As far as I can tell, there has never been another period in The Medical Society of Virginia's history comparable to the past five years when resources have been so taxed or the demands made on the organization quite so heavy. I believe all Society members can be proud of the fact that Virginia has been in the forefront in spite of it all. Your organization is among the leaders in continuing medical education, professional liability legislation, and local health planning.

Nevertheless, the growing demands placed on local physicians and the component societies of the MSV has led to pressures being placed on the Society to expand the number and types of services it offers. For example, it has been suggested that it set up a practice

management program or that it provide guidance to those interested in going into partnership.

Realistically, however, there is a limit. And the ability of MSV to respond to specific needs in health planning or a multitude of other areas will depend heavily on the level of involvement of individual members and component societies.

Increased participation can take several forms. One is direct personal participation in the programs we have mentioned or other ongoing ones. This is very important.

Another form of involvement would be to help the Society to restructure itself so as to be best prepared to respond to major membership needs. This is best done by working through the House of Delegates.

If you have a proposal or recommendation, the first step is to draw up a resolution outlining what you have in mind and have it adopted by your local medical society. Once adopted at the local level, forward the resolution to the Society's headquarters. A request will then be sent to the House of Delegates. At the Society's Annual Meeting, the resolution will be introduced and referred to a reference committee during the first session of the House. During the reference committee hearing, you or any other member of the Society has the right to give testimony.

During the second session of the House, the reference committee will report its recommendation on your proposal. If approved, the House will give instructions to implement your concept.

Whichever avenue you choose to take will enable the Society to further fulfill its charge "to promote the science and art of medicine for the benefit of the people of Virginia, the protection of the public health, and the betterment of the medical profession."

William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

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LETTERS

Commends and Queries Diabetes Section

The section on diabetes mellitus in the March issue[1] is an excellent summary of current thinking about the diagnosis and treatment of diabetes. For the most part, it is non-controversial and contains a lot of worthwhile information. However, the recommendation that neither insulin nor sulfonylurea drugs be used for asymptomatic, normal-weight patients implies that persistent hyperglycemia is harmless. There is no study that demonstrates the harmlessness of hyperglycemia, but there have been several retrospective studies that demonstrate the virtue of good diabetic control.

I currently see 1,000 diabetic patients each year and have followed approximately 10,000 patient-years of diabetes in the past 29 years. Every day I see more evidence that persistent hyperglycemia is a malignant condition that requires treatment regardless of symptoms. Eight years ago a statistician reviewed the records of 1,840 of my patients who had been followed for more than one year. He found that those who consistently had a blood glucose over 180 mg/100 ml died seven years earlier than those who consistently had a lower blood glucose. Unfortunately, he did not evaluate the relative hazard of lesser degrees of hyperglycemia. I follow three patients who have taken insulin more than 50 years and six who have taken it more than 40 years and who are still able to work. These patients have little or no glycosuria, a normal blood glucose before each meal and a normal body weight. In order to achieve this, they all follow a measured diet, test the urine several times each day and usually take more than one injection of insulin each day. Those patients who follow a free diet and take barely enough insulin to control diabetic symptoms are either dead or blind within 20-30 years after onset of the disease. Unfortunately, this latter group is the larger group.

It is unusual for a physician in a university hospital to have the opportunity to follow a group of intelligent, educated and well motivated patients over a long period of time. The hospital-based physician usually sees the derelicts who have never followed a diet or taken insulin properly. They come to the medical center to be "cured" of the complications of their neglect. The center physician eventually believes that all diabetic patients are derelicts because he does not see the good ones.

Dr. Carey's group has followed pregnant diabetic patients for nine months and found that maintaining a normal glucose results in fewer fetal complications. With more long term experience, they would find that all diabetic complications are decreased by meticulous control of the blood glucose. The acute development of diabetic cataracts and diabetic neuropathy always follows an episode of uncontrolled diabetes. The development of diabetic nephropathy in animals follows persistent hyperglycemia and can be reversed to a noticeable degree by controlling the hyperglycemia. Diabetic retinopathy is more severe in patients who are poorly controlled during the first five years of their diabetes. It is general knowledge that hyperglycemia is associated with hyperlipemia and that reduction of the blood glucose by either caloric restriction, insulin, sulfonylurea or even phenformin is followed by a reduction in the serum lipids. The fall in serum lipids that follows the reduction of blood glucose is seen in patients on either a high carbohydrate or a high fat diet. If controlling lipids will reduce atherosclerosis, it is obvious that controlling glycemia is the first step in the prevention of atherosclerosis.

Twenty years ago I published the following criteria of control and listed them in order of importance: 1) relief of diabetic symptoms, 2) avoidance of hypoglycemia, 3) maintenance of optimal weight, 4) blood glucose between 80 and 130 mg/100 ml before each meal, and 5) little or no glycosuria. Physicians who are satisfied with only the first three criteria can work fewer hours each week, but they are denying their patients the definite benefits of good chemical control of diabetes.

James M. Moss, MD

1707 Osage Street
Alexandria VA 22302

1. Carey RM, Tompkins WF, Russell JR et al: Diabetes mellitus updated: standards of quality care in office and hospital practice. Va Med 105:195-218, 1978

The authors reply: Dr. Moss' reputation in the field of clinical diabetes is well deserved and his comments are significant to us as well as to our readers. We

appreciate his general commendation and feel that the issue he raises cannot and should not be avoided. Neither do we feel it can be definitively settled.

Certainly in recent years the pendulum has swung more and more toward the view that good, or "tight", control of diabetes makes a positive difference in outcome of patients. However, there is still no well-designed, randomized, controlled, prospective trial to support that view, with the possible exception of the retinopathy study by Job et al (*Diabetes* 25:463-489, 1976) and this has been recently challenged. Our major concern in our report was not to discourage aggressive treatment of diabetes but to caution against over-interpretation of minor abnormalities of oral glucose tolerance tests.

However Dr. Moss may have interpeted our language, the basis of each of our recommendations has been, not our own personal experiences, but an unhurried evaluation of all the pertinent material in the literature. We did not feel, when we considered this issue, that we had a conclusive body of evidence to make a strong recommendation either way, and therefore said only that "it should be the physician's goal to obtain the best possible degree of diabetic control within the limits of practicality." As therapeutic enthusiasm and technological advances daily extend these limits, we whole-heartedly agree that the care of the patient must keep pace.

Robert M. Carey, MD
John A. Owen, Jr., MD
Stephen L. Pohl, MD

New Name, Expanded Role

The 1978 session of the General Assembly and the Governor of Virginia approved the merger of the University of Virginia and the Blue Ridge Sanatorium as of July 1. On that date the Blue Ridge Sanatorium ceased to exist and was replaced by the Blue Ridge Hospital Division of the University of Virginia. Although the name is changed, the Hospital will maintain a tuberculosis service and accept and treat tuberculosis patients just as in the past, and, in addition, we will expand our role over the next several years to include a diabetic center, an obesity program, an expanded epilepsy unit, complete in- and out-patient psychiatric services, and a cardiopulmonary service.

I want to assure the physicians of The Medical Society of Virginia that the Blue Ridge Hospital will continue to deliver the same excellence care as in the past.

W. H. Muller, Jr., MD
Vice President for Health Affairs
University of Virginia, Charlottesville VA 22901

President's Columns Conjure Visions

I enjoyed Colman McCarthy's editorial offered by President Hagood in his "Up Front" columns in the June issue of VIRGINIA MEDICAL.[1] One can extrapolate with ease the impact on government health care funding and the coincident impending controls of the health care profession, if the general public were to heed Mr. McCarthy's advice.

Robert M. Johnston, MD
65 Gibson Street
Leesburg VA 22075

1. Hagood WJjr: Letter from the President. Va Med 105:406-408, 1978

Protests "Useless Paperwork Increase"

On May 12, 1978, a "Medicaid Memo" (P-41) stated that effective immediately ". . . each physician must include his Virginia Medicaid identification number on *every* prescription blank".

I wrote protesting this arbitrary and useless increase in paperwork (for the privilege of working at about half the usual and customary fee).

The answer I received from F. C. Hays, MD, Medical Director, alleged the requirement was designed for these purposes:

1. Prevent "abuse" by recipients.
2. Prevent "doctor hopping" and acquisition of excessive amounts of controlled drugs.
3. Use of this "information" to restrict the Medicaid recipients to a single doctor and a single pharmacy.

I consider that an extra number (besides name, address, telephone and BND number) will not add any further control capacity, and, if it actually did, would constitute discrimination against the Medicaid recipients, limiting even more their access to medical care.

I have so informed Doctor Hays.

Roger Denis, MD
15521 Warwick Boulevard
Newport News VA 23602

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MEETINGS ABOUT MEDICINE

SEPTEMBER

21-23

Cardiology for the Clinician (American Heart Association, Eastern Virginia Medical School), **Hospitality House, Williamsburg.** Tidewater Chapter AHA, 804/857-5961.

23

Perinatal Medicine Update: Current Information for the Practicing Obstetrician, Pediatrician, and Family Physician (Depts Ob-Gyn/Pediatrics/CME, Medical College of Virginia), **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

29

R. Carl Bunts Lectureship in Urology (Div Urology, MCV), **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

OCTOBER

4-6

Recent Advances in Pulmonary Medicine (University of Tennessee), **Gatlinburg, Tennessee.** Mrs. Grace Wagner, 901/528-5547.

6

Annual Family Practitioners Symposium (Gill Memorial Hospital Foundation), **Patrick Henry Hotel, Roanoke, Virginia.** Dr. David N. Keys, 703/344-2071.

6-8

Regional Meeting, American College of Physicians (Delaware, Maryland, Virginia, District of Columbia), **Williamsburg.** Frank G. MacMurray, 3301 New Mexico Ave NW, Washington DC 20016.

7-10

American Association PSRO Annual Meeting, Del Coronado Hotel, San Diego, California. Aileen Johnson, PO Box 230, Stockton CA 95201.

10-12

Rheumatology Course (American College of Physicians, University of Virginia), **Charlottesville.** Mrs. Mary Lou Currier, 804/924-5318.

12-14

Office Ultrasound (University of Tennessee), **Knoxville.** Dr. Harvey L. Goodman, 615/971-3345.

16-17

Psychiatric Problems in Medical Practice (Johns Hopkins), **Baltimore.** Office of CME, 301/955-5880.

16-20

American College of Surgeons Clinical Congress, San Francisco. Fred C. Spillman, 55 East Erie St, Chicago IL 60611.

18

Pediatric Conference (University of Virginia, Medical College of Virginia), **Winchester.** Mrs. Mary Lou Currier, 804/924-5318.

19

Medico-Legal Seminar (Dept Legal Medicine, MCV, and Office Chief Medical Examiner), **Lebanon, Virginia.** Mrs. Erma Blanchard, 804/786-0496.

20-22

Neurology for the Practicing Physician (University of Virginia), **Charlottesville.** Mrs. Currier, 804/924-5318.

23-26

Interstate Scientific Assembly for the Primary Care Physician (DC Academy Family Practice, University of Maryland, Howard and Georgetown Universities), **Washington DC.** Dr. Alton Ochsner, PO Box 1109, Madison WI 53701.

25

Symposium on Lymphoproliferative Diseases and the John Hoover Moon Memorial Lecture (Division Hematology, MCV) **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

27

Current Concepts in Care of the Elderly (George Washington University), **Washington DC.** Terry West, 202/676-3721.

27-28

50th Annual McGuire Lecture: Cardiology (Depts Cardiology/CME, MCV), **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

NOVEMBER

2-3

Measurement, Monitoring and Critical Patient Care for Generalists in Anesthesia (Johns Hopkins), **Baltimore.** Office of CME, 301/955-5880.

2-3

Clinical Evaluation and Management of Chronic Pain (University of Tennessee), **Memphis.** Mrs. Grace Wagner, 901/528-5547.

5-8

Symposium on Computer Applications in Medical Care (Medical College of Virginia, George Washington and Georgetown Universities), **Washington DC.** Mrs. Erma Blanchard, 804/786-0496.

NOVEMBER *continued*

6-7

Practical Aspects of Cancer Management (Medical College of Virginia and American Cancer Society), **Williamsburg.** Mrs. Ethel Sketchley, 804/359-0208.

8-11

Adolescent Medical and Social Problems (Dept Pediatrics, Div Adolescent Medicine, MCV), **Hospitality House, Williamsburg.** John Hinckley, 804/353-9529.

11-12

Reading Retreat on Rheumatology, Nephrology and Pulmonary Disorders (American College of Physicians, Medical College of Virginia, University of Virginia), **Peaks of Otter Lodge, Blue Ridge Parkway, Virginia.** (Dr. Daniel N. Mohler, 804/924-5118.

15-17

Recent Advances in Clinical Medicine (University of Virginia), **Charlottesville.** Mrs. Mary Lou Currier, 804/924-5318.

16

Pediatric Conference (University of Virginia and Medical College of Virginia), **Roanoke, Virginia.** Mrs. Mary Lou Currier, 804/924-5318.

16

Medico-Legal Seminar (Dept Legal Medicine, MCV, and Office Chief Medical Examiner), **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

17-18

Progress in Pediatrics 1978 (Children's Medical/Surgical Center, Johns Hopkins), **Baltimore.** Office of CME, 301/955-5880.

18

Care of the Critically Ill Patient: the Management of Serious Infections (Fairfax Hospital), **George Mason University Lecture Hall, Fairfax, Virginia.** Mrs. Shirley Kerzaya, 703/698-3219.

AT THE GREENBRIER

"Children's Learning Disabilities," an interdisciplinary course for health care professionals, will be held on November 11-12, 1978, at the Greenbrier, White Sulphur Springs, West Virginia. Course faculty include Ronald M. David, MD (Pediatric Neurology) and Martin Lenhart, PhD (Communication Disorders) of the Medical College of Virginia; Gerald Wallace, EdD (Special Education) and Robert H. Willoughby, PhD (Pediatric Psychology), of the University of Virginia. Course tuition is $75.00. Interested parties should contact Mr. David Prestipino, The Achievement Center, 615 North Jefferson Street, Roanoke, Virginia 24016, telephone 703/982-0218.



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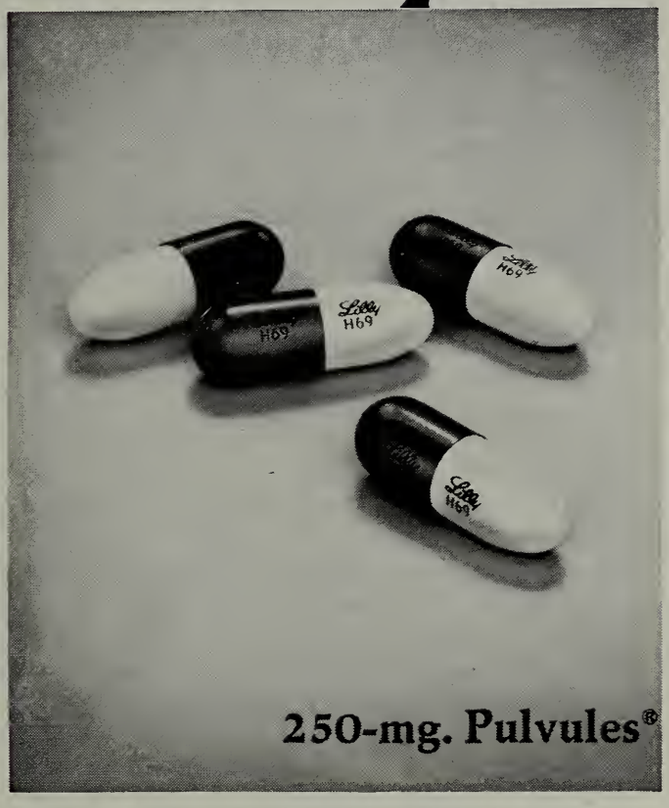
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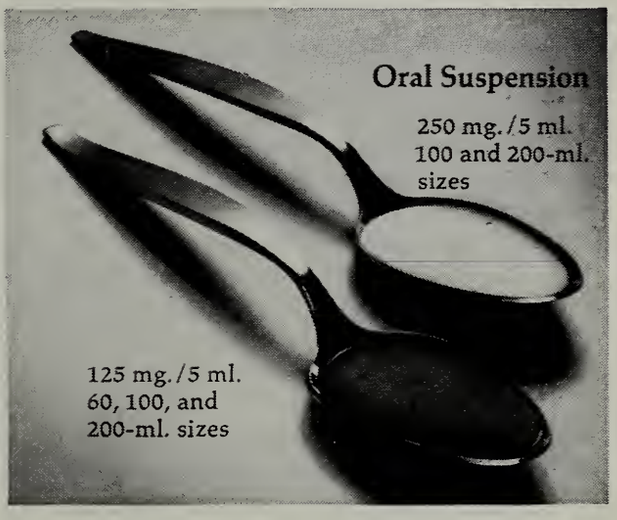
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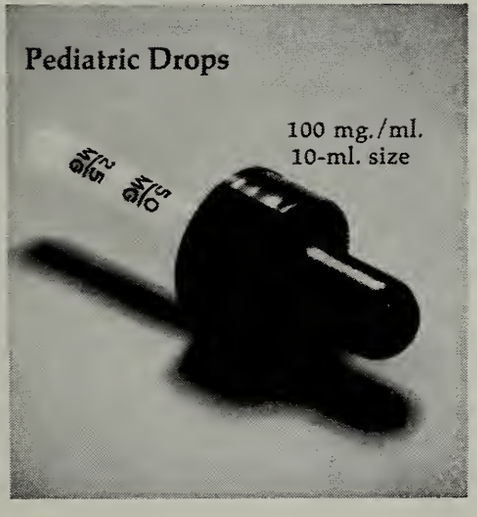
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NEW MEMBERS

Beginning with this issue, new members of The Medical Society of Virginia will be listed according to the component medical society that referred them for membership.

Accomack County Medical Society:

John A. Francis, MD, Obstetrics/Gynecology, Box 68, Belle Haven VA 23306

Albemarle County Medical Society:

Martin Philip Albert, MD, General Practice/Emergency Medicine, Box 59, Ivy VA 22945

Robert Forrest Bedford, MD, Anesthesiology, Box 238, UVa Medical Center, Charlottesville VA 22901

Stuart Thomas Bray, MD, Radiology, Box 259, UVa Medical Center, Charlottesville VA 22901

Samuel Dan Caughron, MD, Family Practice, Route 2, Box 202, Charlottesville VA 22901

Robert L. Chevalier, MD, Pediatric Nephrology, UVa Medical Center, Charlottesville VA 22901

James Gregory Knight, MD, Internal Medicine, 2237 Brandywine Drive, Charlottesville VA 22901

David L. Morris, MD, Internal Medicine, 400 Locust Avenue, Charlottesville VA 22901

John W. Reed, MD, Ophthalmology, 820 East High St., Charlottesville VA 22901

Alexandria Medical Society:

Bernard Grand, MD, Pulmonary Medicine, 5216 Dawes Avenue, Alexandria VA 22311

Arlington County Medical Society:

Paul D. Bruns, Jr., MD, General Practice, 2173 Pond View Ct., Reston VA 22901

Edward Lyle Katz, MD, Neurosurgery, 3801 N. Fairfax Dr., Arlington VA 22203

James C. Waters, MD, Obstetrics/Gynecology, 3115 N. 10th St., Arlington VA 22201

Augusta County Medical Society:

Carrington Harrison III, MD, Orthopedic Surgery, 17 Terry Ct., Staunton VA 24401

Charlotte County Medical Society:

Charles Stewart Davis, MD, General Practice, Box 368, Drakes Branch VA 23937

Culpeper County Medical Society:

Stojmil V. Petkov, MD, Anesthesiology, 2650 Williams Drive, Culpeper VA 22701

Fairfax County Medical Society:

John Brian Cleary, MD, Internal & Pulmonary Medicine, 2847 La Fora Ct., Vienna VA 22180

Josef C. Dvorak, MD, Internal Medicine, 7337 Eldorado St., McLean VA 22101

Vera Cermin Dvorak, MD, Internal Medicine, 7432 Hallcrest Dr., McLean VA 22101

Jan Paul Fruiterman, MD, Obstetrics/Gynecology, 8996 Burke Lake Rd., Burke VA 22015

Tibor John Ham, Jr., MD, General Practice, 508 Harrow Rd., Richmond VA 23225

Alan Harvey Kramer, MD, Internal Medicine, 8316 Arlington Blvd., Fairfax VA 22031

Jose Luis Muratorio, MD, Psychiatry, 6316 Castle Place, Falls Church VA 22044

Hassan Nazif, MD, Pediatrics, 170 N. Virginia Ave., Falls Church VA 22046

Lydora B. Villafuerte, MD, Chest Diseases, 6501 Loisdale Ct., Springfield VA 22150

Orange County Medical Society:

Samuel Pasternack, MD, Internal Medicine, Orange-Gordonsville Community Hospital, Gordonsville VA 22942

Patrick Henry Medical Society:

Clyde A. Swift, MD, Anesthesiology, 1008 Jeb Stuart Rd., Martinsville VA 24112

Portsmouth Medical Society:

Jose B. Chatto, MD, Pediatrics, 6411-B Newport Ave., Norfolk VA 23505

Mohan Lal Chaudhuri, MD, Otolaryngology, 1001 Breckenridge Dr., Little Rock AR 72205

Hector M. Munoz, MD, Psychiatry, 4740 Michaux Rd., Virginia Beach VA 23462

Robert Allen Williams, MD, Emergency Medicine, 1604 Hilltop West, Virginia Beach VA 23451

Richmond Academy of Medicine:

Marco Aurelio Amendola, MD, Radiology, Box 728, MCV Station, Richmond VA 23298

John Raymond Bowen, MD, Occupational Medicine, 4500 S. Laburnum Ave., Richmond VA 23231

Anne Clayton Brower, MD, Diagnostic Radiology, Box 728, MCV Station, Richmond VA 23298

Renard Adkins Charity, MD, Obstetrics/Gynecology, Box 7939, Richmond VA 23223

Yuh Teh Chen, MD, Physical Medicine & Rehabilitation, 1506 Monmouth Dr., Richmond VA 23233

Earl Henry Diehl, Jr., MD, Gastroenterology, 7601 Forest Ave., Richmond VA 23229

Leon M. Dixon, MD, Internal Medicine, 1951 Reymet Rd., Richmond VA 23234

Harold Paul Dunn, MD, Pathology, 322 Albemarle Ave., Richmond VA 23226

Peter Herbert Goldmann, MD, Ophthalmology, 1714 Havenwood Dr., Richmond VA 23233

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Blithewood Dr., Richmond VA 23225

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Roanoke Academy of Medicine:

James Richard Castle, MD, Pulmonary Medicine, 1030 S. Jefferson St., Roanoke VA 24016

Phillip M. Clifton, MD, Child Psychiatry, 1902 Braeburn Dr., Salem VA 24153

Donald John Race, MD, Ophthalmology, 1138 2nd St., SW, Roanoke VA 24016

Bruce Neal Stewart, MD, Pulmonary Medicine, 1030 S. Jefferson St., Roanoke VA 24016

Rockingham County Medical Society:

Paul T. Yoder, MD, General Practice, 1000 Mt. Clinton Pike, Harrisonburg VA 22801

Floyd County Medical Society:

Garry H. Kuiken, MD, Family Practice, Floyd VA 24091

Franklin County Medical Society:

Kenneth Wilson Lucas, MD, Family Practice, 209 Maple Ave., Rocky Mount VA 24151

Fredericksburg Medical Society:

Michael L. Cherwek, MD, Cardiology/Internal Medicine, 2300 Charles St., Fredericksburg VA 22401

Jose F. Colina, Jr., MD, General Practice, 707 Westwood Office Park, Fredericksburg VA 22401

William D. Sasser, MD, General Surgery, 2301 Fall Hill Ave., Fredericksburg VA 22401

Northampton County Medical Society:

Jean Bernard du Buy, MD, Emergency Medicine, Wachapreague VA 23480

Northern Neck Medical Association:

David Howard Summers, MD, Pediatrics, Box 1131, Kilmarnock VA 22482

Paul Richard Summers, MD, Obstetrics/Gynecology, Box 1131, Kilmarnock VA 22482

NEW MEMBERS

Norfolk Academy of Medicine:

Thomas J. Arkins, MD, Neurosurgery, 607 Medical Tower, Norfolk VA 23507

Young Shin Chee, MD, Anesthesiology, 809 Brandon Ave., Norfolk VA 23517

A. Jack Childress, MD, Obstetrics/Gynecology, 6589 Stoney Point South, Norfolk VA 23502

Richard L. Cullen, Jr., MD, Internal Medicine, 601 Medical Tower, Norfolk VA 23507

David Carl Grulke, MD, Internal Medicine, 844 Kempsville Rd., Norfolk VA 23502

William Neal Hovland, MD, Internal Medicine, DePaul Medical Building, Norfolk VA 23505

David H. Johnson, MD, Pediatric Cardiology, 609 Colley Ave., Norfolk VA 23507

Carolyn A. Love, MD, Internal Medicine, 2209 Cannon Dr., Virginia Beach VA 23510

Leslie Barri Oppleman, MD, Internal Medicine, 332 French Court South, Virginia Beach VA 23454

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Clyde W. Wilcox, Jr., MD, Radiology, 600 Gresham Dr., Norfolk VA 23507

Hee Dong Yoo, MD, Anesthesiology, 1306 Riviera Dr., Virginia Beach VA 23462

Newport News Medical Society:

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John Lee Lockhart, MD, Obstetrics/Gynecology, 606 Denbigh Blvd., Newport News VA 23602

Hugh Bernard McCormick, MD, Cardiology, 6 Meeting Rd., Newport News VA 23606

Thomas J. Reagan, MD, Neurology, 11 Bruton Ave., Newport News VA 23601

Thomas Marvin Stiles, MD, Orthopedic Surgery, 324 Main St., Newport News VA 23601

Bertram F. Townsend, MD, Anesthesiology, 563-B Turnberry Blvd., Newport News VA 23602

Northern Virginia Medical Society:

Richard L. Fieo, MD, Obstetrics/Gynecology, 1330 Amherst St., Winchester VA 22601

John Giangola, MD, General Practice, Winchester Memorial Hospital, Winchester VA 22601

John William Kerns, MD, Family Practice, 920 Shenandoah Ave., Front Royal VA 22630

Hector T. Toledo, MD, Anesthesiology, Route 5, Box 482-A, Winchester VA 22601

continued next page

NEW MEMBERS

continued from previous page

John Boyd Willey, MD, Obstetrics/Gynecology, 1330 Amherst St., Winchester VA 22601

Southside Virginia Medical Society:

Eugenio V. Antonio III, MD, General Surgery, 1204 Terrace Ave., Hopewell VA 23860

Kalale S. Krishnamurthy, MD, Internal Medicine, 116 S. Sycamore St., Petersburg VA 23803

Faiq Asad Masri, MD, General Surgery/Oncology, 1507 Mt. Pleasant Dr., Colonial Heights VA 23834

Pannala J. M. Reddy, MD, Psychiatry, Central State Hospital, Petersburg VA 23803

Pannala Vijaya Reddy, MD, Obstetrics/Gynecology, 343 Greenwood Dr., Petersburg VA 23803

Shrihari S. Sakhadeo, MD, Public Health, 54 Ivy Lane, Petersburg VA 23803

Peter Alan Sim, MD, Family Practice, 107 Winster Fax, Williamsburg VA 23185

Southwestern Virginia Medical Society:

Daniel Brian Drysdale, MD, Ophthalmology, Medical Arts Building, Blacksburg VA 24060

Roger Arthur Glover, MD, Obstetrics/Gynecology, Box 596, Abingdon VA 24210

Bruce Allen Watson, MD, Ophthalmology, Box 1172, Radford VA 24141

Tri-County Medical Society:

Maung T. Myint, MD, Anesthesiology, 506 Canine Trail, Suffolk VA 23434

Virginia Beach Medical Society:

Maurice Ivan Martinelli, MD, Diagnostic Radiology, 800 Independence Blvd., Virginia Beach VA 23455

Stephen A. Schechner, MD, General Surgery, 4456 Holland Rd., Virginia Beach VA 23452

Williamsburg-James County Medical Society:

John E. Grasinger, MD, Orthopedic Surgery, 322 Monticello Ave., Williamsburg VA 23185

Anthony J. Taylor, MD, Urology, Box 254, Williamsburg VA 23185

Courtesy Members (Residents):

Walter Palmer Lowery, MD, 27 Holly Dr., Newport News VA 23601

Walter Copley McLean, Jr., MD, 616 Rugby Rd., Charlottesville VA 22903

Owen D. Oksanen, MD, Route 6, Box 103-AA, Charlottesville VA 22901

George Russell Splane III, MD, Box 907, MCV Station, Richmond VA 23298

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VIRGINIA
MEDICAL
SEPTEMBER 1978

Foreseeable Trends in Health Care Delivery

Wyndham B. Blanton, Jr., MD, *Richmond, Virginia*

"These trends represent the obvious call from society for health change: enlarged access to the system; reduction in the rate of rise in cost; equity in care; and increased quality in care. All of these elements except the cost objective require not lessened but additional and redistributed resources. If this is pleasing, exert influence to reinforce the trends toward it. If not, speak now to modify the otherwise inevitable."

THE foreseeable trends and problems in health care delivery are many. Although the probable changes are apparent, it is difficult to give priority to their significance. Hence, they are presented in no meaningful order.

This presentation is designed solely to identify these trends and not to debate their appropriateness. The reader, however, is expected to consider each in light of his particular vested interests and to decide whether or not to resist actively or passively or encourage the particular vector of change.

The **cost of health care**, moving upwards for many years, will continue to rise in the foreseeable future, although the rate of change may slow down. The continued increase in the sophistication of the product called health care will force this. In a day when it is awesome, but plausible, to contemplate even a bionic man with tiny TV sets implanted in his eye sockets and tied into brain tissue to give "sight," artificial limbs with a sense of touch which respond to thought, an artificial heart, liver, and kidneys, it is easy to understand why the increasing complexity of health care necessitates an upward spiral in health care cost. Such fantastic, previously unimaginable developments in health care which today appear often, although eagerly sought, lead to the "failures of our success" as the sick live longer and more expensively.

Government will endeavor to control costs by arbitrary caps on expenditures, but these will fail unless the input prices to the system are also capped. Government will formally ration resources as dictated by current planning legislation. Informal rationing also may be done, as in England, by queuing. It is probable that all efforts at cost containment will fail unless society can overcome the emotional, social, and polit-

From the Charter Medical Corporation, Richmond, where Dr. Blanton is vice president for medical affairs. Address him there at 1526 West Avenue, Richmond VA 23220.

Presented at the annual meeting of the Virginia Lung Association, March 30, 1978, Williamsburg.

ical barriers which prevent our being content with more limited, prioritorized benefits in order to obtain cost reduction.

The second trend which will dominate health care in the foreseeable future is the continued **institutionalization** of the system. The components will be larger and more formally organized, looking for efficiency of size, sharing of skill and expense, better management of insurance risk, and dilution of professional responsibility, while seeking protection against government and external organizations. Solo practitioners and partnerships will combine and incorporate. Physicians will home-in increasingly on the hospital locale.

Several things will cause the hospital more often to be the focus of care. The centralization of high technology is necessary. The hospital is willing to accept responsibility for health care of a definable population (a boon to planners toward which smaller and specialized practitioners default). The hospital has the ability to play a meaningful role in preventive medicine. The patient is constantly in search of a single identifiable source of total care and resentful of fragmented care.

Many social and educational, often voluntary, services presently furnished in the community will default to the institution, in part because there will be money designated by a socialized system to pay for the previously free service. The hospital will expand its service base to the ambulant and healthy segment of society through its outpatient departments, emergency rooms, 24-hour turnaround services, satellites, preventive efforts, screening clinics, etc.

Another indentifiable health care trend is the continued increasing **socialization of the reimbursement system**. The public promise of universal access to adequate care, the present evident inadequacies, the great potential cost liabilities, and the continued search for security will lead to the acceptance of public responsibility for the cost of care to those with inadequate insurance coverage. Twelve to eighteen million US citizens have no health insurance coverage, and over 35 million have no catastrophic coverage. This trend represents only an extension of present policy because there already is national health insurance through Medicare, Medicaid, and the maternal and child health programs. The only remaining decision is how inclusive and how elaborate to make it.

In the foreseeable future there will be **increasing regulatory activity**, primarily federal. This is obvious, and the reasons will not be developed here. The freedom and independence of the health care entrepreneur that guided the delivery system over the last several decades will never be seen again because of bureaucratic interest created by the volume of government money directed toward health care and the resulting public concern (as artificially fanned as it may have been). The authority already exists in legislation, enacted but not yet implemented, to monitor and constrain the delivery system far beyond present restrictions.

National standards for health care are surely coming, if they are not already here. Increasing federal money and interest in health care make it seem essential that the problems of the southeast are the concern of the northwest also.

Among the many problems in health care regulation is the fact that there is yet no adequate measure of the effectiveness of our health care. Mortality and morbidity statistics do not reflect health. Length of stay is an inadequate measure of hospital utilization which, in turn, does not correlate well with cost.

It is shamefully apparent that political experiments with health will continue. Without impact studies on sample populations, legislation of irreversible nationwide gambles, as the Medicare/Medicaid programs, will continue.

In the foreseeable future, society will try to come to grips with the problems of **uneven distribution of professional services.** Such maldistribution, combined with the cost of care, is the greatest deterrent to patient entry into the health care system. The geographical flow of physicians away from the rural and ghetto areas is only the signpost of the problem. The difficulties of health care distribution are much more complex. They obviously involve the location of the resources for care, personnel as well as physical, the distribution between specialties, and the availability of paramedical professionals with varied levels of training. For example, a sufficiency of qualified paramedics may obviate the need for the physician in many situations.

Virginia will have an **oversupply of physicians** within five years, surely within the foreseeable future. A whole new set of attendant problems will arise: the added cost; the overly trained professional (analogous to the overly educated housewife); the hungry surgeon; medical training positions limited by community needs rather than by student desire.

This country will ultimately realize the need to accept the basic concept that the **individual must bear the responsibility for his own health**, while society only guarantees the public health aspects, the education to choose among the options, and the access to the system (an access currently jeopardized by too much specialized fragmentation of service, too few dollars, and too great social and geographic isolation).

In the foreseeable future, this country will **abandon the consolidated approach** to health care of the total

populace and instead will move to separate the preventive aspects and the control of the environment and isolate them from the care of the sick. In the combined setting the attention to the preventive and socio-environmental has suffered at the hands of the more dramatic imperative—the care of the sick and injured.

In the future the United States will continue to espouse **primary care** in order to balance low technology against the uncoordinated growth of the highly sophisticated, to foster prevention vis-a-vis crisis care, and to seek for a holistic answer to a problem presently compounded by fragmentation. Yet—**specialization will increase.** There must be concern lest we develop a two-tiered system, with referrals not laterally between peers with different interests but upwards to a more handsomely rewarded specialist in charge.

Such satisfaction of the responsibilities and guarantees, such separations of modes of health care, and such balancing of the fragmented technologies, will provide an **increasing role for the non-physician** in health care planning, organization, and delivery. The economics, the social needs, and the professional abilities dictate the utilization of the so-called physician extender.

However, the **ultimate physician-extender** will not be a paid paramedic but the patient himself. He will be trained from childhood in the characteristics, requirements, measurements, minor diagnoses, and treatment of his body. Repeated frequent office visits to a physician for the measurement and management of weight and uncomplicated blood pressure, for example, is not only a waste of resources but also an insult to our educational system.

In the future, the **management of health data** will occupy a larger amount of national time and money. The country will computerize more vigorously, create more encompassing management information systems, manage health data so as to make individual data sets available nationally, and develop national and regional data bases.

In so doing, over time the dictates of societal need will subordinate the rights of the individual in his desire for anonymity. This has already begun. **Confidentiality,** as it was known yesterday, is doomed.

The **consumer's role** in the control and design of the delivery of health care has shifted and will change further as the format for his participation is strengthened.

In the foreseeable future, the **philanthropic dollar,** which has been going into the voluntary sector, will decrease as third parties become more inclusive in their provisions and as bureaucratic forces seek to expand their influence. This will happen just as surely as the percentage of all such dollars going to higher education has decreased.

THESE are but some of the probable trends in health care delivery. Whether or not such trends seem to be solutions or problems will be determined, at least partly, in the eye of the beholder. In any event, these trends represent the obvious call from society for health change: enlarged access to the system; reduction in the rate of rise in cost; equity in care; and increased quality in health care. All of these elements except the cost objective require additional and redistributed, not lessened, resources.

In a time of demanded cost containment as today, instead of such additional resources even the existing are being pruned. The resulting fight between the existing health care powers for the residual resource and dollar will be long and tumultuous.

In the future, this country, already rendering the best health care in the world (in spite of spotty areas of inadequate access, poor quality, and unreasonably high cost, and notwithstanding statistical distortion to the contrary), will be groping its way into an ultimate system of uniquely American health care. There will be a number of sources of conflicting power for change: the medical profession with its practitioners, schools, and research communities; the hospitals led by boards which represent the elite of every community; the heavily funded insurance organizations which are influential in every state; other and diversified groups, from drug houses to architects, which also profit in health care; the federal bureaucracy, our fourth branch of government, no longer representative of others but self-perpetuating, growing, and truly controlled by no one; and the consumer, led by industry and labor.

The degree of fulfillment of the trends treated here, the orderliness of the process, the resultant shift in vested interests, and the reallocation of existing resources will depend on the relative strengths within this existing six-faceted health care power base—a conglomerate whose components will espouse or obstruct the trends according to their self interests.

Whatever the influences, the composite health care system resulting from these trends of the foreseeable future will present a more costly, sophisticated, institutionalized, regulated, and socially reimbursed but less confidential system. It will attain better distribution of resources and depend upon the individual to assume the responsibility of his own care, which will be less holistically rendered by professionals less dependent on the physician for leadership.

This is the end point. If it is pleasing, exert influence to reinforce the trends toward it. If not, speak now to modify the otherwise inevitable. ■

CANCER TRENDS

Edited by J. Shelton Horsley, III, MD, Gerald Goldstein, MD, and Francis E. Rosato, MD.

Childhood Leukemia: Perspectives 1978

Diane M. Komp, MD, and Robert P. Fortunato, MD
Charlottesville, Virginia

With intensive chemotherapy and a minimum of hospitalization, great progress has been made in extending the lives of children with acute lymphoblastic leukemia. Of equal importance is attentive support for those whose lives are lengthened and their families.

ACUTE lymphoblastic leukemia (ALL)—dread killer of little children or showpiece for the efficacy of chemotherapy? Today, a 50% five-year survival figure is often quoted when physicians discuss this disease, with self-congratulations that the median is no longer five weeks. This is a report to Virginia physicians on recent accomplishments and future horizons. It defines the progress since a similar assessment published five years ago in this journal.

Is acute lymphoblastic leukemia one disease?

The diagnosis of ALL is a morphologic one based on the visual interpretation of bone marrow aspirates and peripheral smears stained with Wright-Giemsa and special stains such as peroxidase, PAS and Sudan black.[1] But all patients fitting the morphologic and cytochemical criteria do not share the same prognosis.

A retrospective study[2] of 1024 patients by the Southwest Oncology Group demonstrated the significance of certain pre-treatment characteristics in predicting survival. The most significant factors were *age* and total peripheral *white blood cell count.* Attention in this study and others[3] was also directed to the shorter survival for black patients. It has been speculated that health care patterns strongly influence racial disparity in prognosis. We have, however, observed a poor response to therapy in a number of black children who have been well-stabilized clinically so that neither infection nor bleeding compromised their immediate survival.

In addition to clinical observations, we have new ways in the laboratory to demonstrate that all lymphoblastic leukemias are not the same. Examination of blast membranes for the characteristics of lymphocytes of thymic origin (T cells) and those of bone marrow or bursal equivalent origin (B cells) help to further classify "lymphoblasts". The majority of children with ALL have blasts that neither rosette with sheep red blood cells (T cells) nor contain surface

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immunoglobulin (B cells) and have been accordingly designated as "null cells." Patients with null cell leukemia enjoy a far better prognosis than those who show either specific marker.[4] Studies are currently under way to further classify the null cell leukemias with specific antisera raised to T and B cell.

How do these prognostic factors influence treatment?

The major advances of the past decade have occurred in patients of good prognosis. Further breakthroughs are unlikely to occur for this group from manipulation of drug permutations and combinations. Many of the current research trials address the issue of minimizing therapy to accomplish the same purpose in good prognosis patients.

All current treatment trials separate out the patients with poor prognosis and are evaluating aggressive regimens. In the Southwest Oncology Group, all poor prognosis patients, except for T cell leukemia, are randomized between two intensive regimens. Because of the biologic relationship with non-Hodgkin's lymphoma, T cell leukemia and lymphoma patients are being treated with a modification of Wollner's SLA_2-L_2 protocol.[6] This regimen has become the standard for childhood non-Hodgkin's lymphoma against which all other regimens must be judged. To date, our own experience with this regimen has been encouraging in T cell leukemia.

If a patient does well, how long is therapy needed?

The well-publicized St. Jude's regimen[7] that is frequently quoted with high survival rates stopped therapy at 2½ years on an empiric basis. Parallel studies are currently under way in the Southwest Oncology Group and Children's Cancer Study Group to evaluate the stopping point on a randomized basis. At three years of continuous complete remission, patients have been randomized to either continue or discontinue maintenance chemotherapy.

One interesting aspect of this study has been the discussion with the families in the months preceding the landmark visit. Most often, informed consent is given under the stress of a relapse by a parent dependent on the judgment of the physician, with relative risks of toxicity overshadowed by the hope of remission. It has been refreshing to discuss the merits and potential problems of the randomized study with parents who are free to discuss their own thoughts, biases and aspirations. Perhaps these are the major advancements in the management of childhood leukemia: parents are informed, parents can understand, parents can make intelligent decisions, parents are not powerless victims.

To date, the study has shown no advantage in continuing chemotherapy for patients with *documented* complete remission. There has been, however, a problem with that documentation in boys, where the testis is a potential site of extramedullary disease[8] as illustrated by the following case.

B.L. was 6 years old when ALL was diagnosed. His treatment included vincristine-prednisone induction, CNS prophylaxis with intrathecal methotrexate-hydrocortisone-cytosine arabinoside for a year and maintenance oral 6-mercaptopurine and methotrexate. He remained disease free and on the third anniversary of his remission had a normal bone marrow and spinal tap. Careful palpation of both testes revealed normal prepubescent consistency and size. All chemotherapy was stopped. One month later, one testis was noted to be grossly enlarged and hard. Biopsy confirmed leukemic infiltrate.

Our current recommendation is that all boys who reach 3 years have bilateral testicular biopsy before being considered for discontinuation of therapy. The prognosis once testicular relapse occurs is not good.[9]

Continuation of 6-mercaptopurine and methotrexate is not without its problems. Hepatotoxicity has been seen in the absence of clinically apparent liver disease.[10]

Of interest is the fact that our parents' "biases" run 50-50 for and against continuing therapy. The same bias ratio applies for my staff. Thus, there is room for a randomized trial to settle the issue.

What can be done about early detection by the primary care practitioner, which would influence prognosis?

There is no routine screening test such as breast self-examination or Pap test that applies to childhood leukemia. The majority of children, however, are seen by a physician more than once before leukemia is suspected.

We have reviewed the initial information on children referred to the University of Virginia during the past 10 years to determine 1) if there has been a change in the early detection of leukemia; 2) if there is any room for further improvement. Table 1 summarizes a most significant observation. The figures for 1967-1973 have been previously published.[11] The data for 1974-1977 show continued improved early recognition of leukemia before life threatening infection removes any chance for chemotherapy to work.

The most commonly considered signs of leukemia are lymphadenopathy and evidence of bleeding or

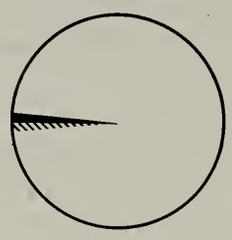
Table 1. Characteristics of Children with Acute Lymphoblastic Leukemia Treated at University of Virginia 1967-77

	1967-70	1971-73	1974-77
% Severe infection on admission	47	17	8
% Death during first month	16	0	2
% Complete remission	84	100	96

infection. These, however, are late manifestations. The most common first symptoms are fever over 101° F, bone pain (leg, hip or back), fatigue and abdominal pain. Obviously, these are nonspecific symptoms. If any of these symptoms persist for more than a week, a complete blood count should be obtained. A bone marrow aspirate should be considered if 1) abnormal lymphocytes are seen on the peripheral smear; 2) the absolute granulocyte count is less than 1500/mm^3 (total WBC × % granulocytes); 3) lymphadenopathy or hepatosplenomegaly is present; 4) a normochromic, normocytic anemia (hematocrit less than 30%) is present.

Where does the primary care physician fit in once the child has been referred to a center?

Today his job is bigger than ever. Figure 1 illustrates the relatively insignificant amount of time required in a patient's lifetime for center hospitalizations and visits. Since these data include recently diagnosed patients, the medians are relative to each other and do not represent true median survival. At the University of Virginia we serve a rural population (Fig. 2) that lives a median distance of 120 miles from Charlottesville. In most rural towns, the primary care physician is the "consultant" to the town that now must re-assimilate a living cancer patient rather than mourn one who passed on.



Inpatient Days	Outpatient Visits	Survival
median 20	median 31	median 568
range 2-132	range 3-132	range 120-3

Fig. 1. Time in hospital relative to their lifetimes for children with leukemia.



Fig. 2. Large dots represent home towns of children with leukemia referred to the University of Virginia.

Sharing these patients with their physicians has been a rewarding experience for us. A "stolen" patient is as instructive to his primary physician as a dead one. The chronic optimism that characterizes oncologists can best be communicated by a healthy child accompanied by coping parents.

What of the child who will not survive his disease? The community physician who has participated in his care all along is in the best position to participate in his support for death. Modern leukemia treatments are such that at least half of the deaths can occur at home if the family so chooses.[1] This would not be possible for our rural population without the backup of his family doctor.

Following a child's death, the physician who is seeing other family members can provide invaluable assistance to the family by allowing them to discuss ther departed child and any problems they now face.

Summary

1) The majority of children with leukemia now enjoy close to normal lives in their home communities.

2) The successful management of the child requires close collaboration between the oncology center and the community.

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How to Prescribe Under the New Virginia Voluntary Formulary Law

Virginia physicians must order new prescription forms for use beginning January 1, 1979, to meet requirements of the Virginia Voluntary Formulary legislation. Note the two lines for signature on the sample at right; they must appear as shown on every form.

Signature on the "Voluntary Formulary permitted" line signals to the pharmacist that he may select a drug product from the approved Formulary list. The bottle dispensed and the prescription filed will specify the product dispensed.

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Voluntary Formulary permitted — Dispense as written

Oncol 16:226, 1975

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CANCER TRENDS COMMENT

This review of childhood leukemia clearly shows the progress that has been made in the treatment of what formerly had been a rapidly devastating disease. Intensive chemotherapy is given with a minimum of hospitalization. The treatment is an effort in which the family physician or referring pediatrician and the center specialists cooperate and share their talents. Outreach visitation programs are being developed to help the parents of children with acute leukemia learn and profit from the experiences of other parents who have children with the disease.

The comprehensive care, with attention to all aspects of the life of the patient and relations with family, school, and others, is a model of what we hope can be duplicated in the treatment of other cancer.

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Northern Virginia Mental Health Institute: A Decade of Success

Thomas B. Stage, MD, *Falls Church, Virginia*

"In some ways the Institute probably has been too efficient for its own good. It has had none of the serious problems that seem, these days, to be the key to funding and support, and the cost per patient day in the year 1977 dropped from $64 to $54."

THE Northern Virginia Mental Health Institute opened in January, 1968, as an entirely new concept for a Virginia state hospital. The plan was for a hospital within the community with no imposing buildings, with open wards, and with quick return of patients to their homes. The Institute was developed to prevent short-term patients going 160 miles to Western State Hospital in Staunton, Virginia, which suffered the chronic difficulties of staffing so common to the older, large, rural state hospitals. Secondary goals were to develop training and research at the Institute.

How successful has this been? It has been very successful. Six out of seven patients entering public mental health hospitals from Northern Virginia are now treated at the Northern Virginia Mental Health Institute, while the seventh still goes to Western State Hospital in Staunton.

Although the basic concept proved sound, the original plan has been modified in a number of ways. In essence, the community's needs changed, and then the demands from the community increased, so that the hospital had to change.

Dr. William S. Allerton, first director of the Institute, wrote an article for this journal in 1967.[1] He said then that the Institute "has the mission of intensive treatment for acute psychiatric disturbances". We do admit many patients with acute psychiatric disturbances; on the other hand, many of the patients whom we now admit are having exacerbations of chronic illnesses. During its first ten years other mental health centers have developed in Northern Virginia; these are treating many patients with less serious but more acute psychiatric disturbances who in the early days would have been hospitalized at the Institute. Consequently, we have room to treat many patients with exacerbations of chronic illnesses, who in the beginning days of the Institute were referred to Western State.

Again, Dr. Allerton said that "the hospital is of the completely open type, with no locked doors or limiting physical structures which would constitute impairment of the responsibility or relative freedom of the individual patients". The hospital remains an open-door hospital. On the other hand, in the early days of the hospital three rooms had to be converted to seclusion rooms because certain patients were ad-

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mitted who were so disorganized, either because of their psychiatric illnesses and/or because of drug-related disturbances, that they could not be maintained in the open setting. These patients are secluded for only short periods of time until they can be medicated, and the open ward concept remains a highly successful one.

It was originally planned that the hospital would have a professional staff of eight psychiatrists, seven social workers, five clinical psychologists, and 67 on the nursing service. The staffing has never been that good. When the Institute opened, it proved impossible to recruit staff at the salaries that the Commonwealth of Virginia was paying in Northern Virginia, which has one of the highest costs of living in the United States. Initially, the local communities supplemented the state salaries. Later, the employees at the Institute were given a cost-of-living increase by the state, which was several steps above that of the employees in the rest of the state; but the total amount of money budgeted for the Institute was not appreciably increased and, therefore, the Institute has operated with less staff than originally planned. It was also originally planned that there would be two occupational therapists and one recreational therapist. Because of the demands of Medicare, which said that these services were understaffed, funds had to be shifted from other professional staff into these areas in order to qualify for Medicare payments.

In the beginning it was thought that the hospitalized patients would usually be voluntary and only occasionally hospitalized by commitment. The commitment laws of Virginia have changed drastically a number of times during the past ten years. Ten years after the opening of the Institute, about 30% of the patients are involuntary patients. The Fairfax Court meets at the Institute seven days a week. Patients are detained at the Institute for a two-day period of observation and hearings. In some ways it is a tremendous change in psychiatric treatment to have a hospital whose patients are up to one-third involuntary maintain an open-door policy, but this has been successful in almost every instance of patient care. Originally, the Institute was set up as having a "maximum stay of six months with an expected average period of stay between 40 and 50 days".

Because of increasing demands upon the Institute several years ago, the maximum length of stay was lowered to four months. After a review of patients who had stayed for six months, it was obvious that their conditions changed very little between the fourth month and the sixth month, and that if they were to be discharged within four months the beds could be available to other patients. The average length of stay at the Institute now for all patients is 19 days. This average of nineteen days includes patients



Architect's model of the Northern Virginia Mental Health Institute. *Courtesy of the State Department of Mental Health and Mental Retardation.*

who are detained but later released or transferred to other hospitals, and also includes patients who are admitted in a crisis and may leave in a day or two. A study of patients who stay more than four days, and who could more logically be considered to be treatment patients, shows that the average treatment patient stays about 30 days.

Another new concept was proposed in 1967. "An admission committee will be established within the facility and all referred individuals will be seen prior to a decision made by the professional staff as to whether or not the individual is a suitable candidate for the therapeutic program. A mandatory requirement will be placed on the families of patients being considered for admission. This requirement will constitute a contract between the family and the hospital that if admission is decided upon, the family must be willing to participate in the therapy program themselves, at least on a once-a-week basis". This again has been generally successful; usually 60 to 65% of our patients are involved in family therapy. On the other hand, we do have a number of patients whose families either live where it is difficult for them to come to the hospital, or the family is alienated from the patient and does not take part in the patient's treatment. Dr. Allerton went on to say that, "Failure of family members to participate in the therapeutic program will mean that the patient cannot be admitted or will have to be transferred elsewhere. Medical and judicial authorities planning admissions or commitments to this facility will be informed of this policy so they can evaluate whether or not the individual and his family will all be willing to participate in the treatment program. Individuals committed to the Institute who are not considered to be suitable candidates for the therapeutic program will be transferred to another state facility". Again it appears that perhaps Dr. Allerton had more faith than was warranted in both families and courts, although most families and most judicial authorities have been cooperative.

A reality has been that a number of patients we receive are those that come from private facilities after their insurance has run out. They are not primary referrals for our treatment program. We have also found that in some instances patients are referred who are relatively inappropriate for the treatment setting, but since they are judicial referrals the hospital has little choice but to accept these patients. Whereas it was originally envisioned that the great majority of the patients would be admitted to the hospital during the usual 8:15 AM-5:00 PM, five-days-a-week working hours, changes in the commitment laws and the growth of the emergency services in the mental health centers have made this about half true. Around 50% of the patients are now admitted in the evening, night, and weekend hours. This has raised particular problems since the hospital originally had only nursing staff for the evening, weekend, and night hours, and the total staffing has not been increased to any extent.

The Institute has been very successful in not having to transfer many patients to a long-term setting. Of the patients admitted to the Institute and begun in the treatment program, only about 20 get transferred to Western State Hospital each year. Very few of these patients are transferred because they cannot be successfully treated in the 120 days; most of the patients who are transferred are those who develop intercurrent medical illnesses that we are not able to treat because we have no primary medical facilities, or are patients who are not cooperative with the treatment program in an open setting and because of their frequent absences from the hospital do not improve in the treatment program. Dr. Allerton summarized the treatment aspect of his article by saying, "The hospital's complete openness will be coupled with the general attitude of positive expectancy for recovery, and a positive expectancy for responsibility on the part of the patient will be engendered in the Institute". This has been successful despite the stresses and strains, the varying demands, and the increased workload.

The basic concept has proven to be a sound one, but some of the original expectations have had to be tempered with the realities of the times and the changing social situations. It was originally envisioned that when the Institute became fully operational there would be about 800 admissions per year. In reality, we admit about 1,500 persons per year.

In some ways the Institute probably has been too efficient with its limited resources for its own good. It appears that the way for public hospitals to get funding and support, in this day and age, is to develop serious problems, and of these the Institute has had none. Quite the contrary. The Institute has gone from 1967 to 1977 with very little increase in staff. There have been increases in funding, but these have been used up in the cost-of-living increases for employees' salaries and for the increased cost of supplies, fuel, and food. The Institute has been accredited by the Joint Commission on Accreditation of Hospitals and retains its two-year accreditation. It is regularly surveyed by Medicare and has had no serious difficulties in retaining its Medicare certification. No major scandals have developed at the Institute. The Institute was probably the only hospital in the United States to charge patients less in fiscal year 1977 than it did in 1976. This was due to the fact that it operated at nearly 100% capacity throughout most of the year

of 1977 while the Commonwealth of Virginia imposed a 6% cutback on funding of all state operations. The Institute spread less money over more treatment and patients, and the cost per patient day dropped from $64 to $54 during the year 1977.

Secondary missions originally proposed for the hospital were those of training and research. The training missions have been entirely successful. At a time when psychiatric residencies not affiliated with medical schools were phasing out, the Northern Virginia Mental Health Institute originated a psychiatric residency and is today successfully continuing that residency. In operation for seven years, it now has three residents in each year of the three-year psychiatric residency and is the only psychiatric residency in Northern Virginia. In addition, the Institute serves as the training site for one university school of nursing and four junior college schools of nursing, for psychology interns, social work students, and for occupational therapy, recreational therapy, and medical records trainees. It was hoped in the early days of the Institute that federal funding could be gained for research programs, but federal research programs began to dry up at just the time the Institute was opened.

THE INSTITUTE is at a serious turning point. It has functioned very well during the ten years and has served a real community need. On the other hand, many of the demands on the Institute have not been reinforced with the resources to meet those demands. We admit patients beginning at the age of 14, and at any one time 10 to 15% of our patient population are teen-age patients. Homebound teachers are used for the patients who stay longer periods of time, but most of our patients need more immediate help with their educational activities during the few weeks that they are hospitalized. This has not been available.

With the increase in involuntary patients we have many more problems with families and with visitors of patients. The hospital, starting as an open hospital in a relatively rural setting, had no security force whatsoever, and still has none. Now the hospital area is crowded and urban, with problems of theft and parking and with disturbed visitors making unreasonable demands of the staff, and we must rely on the local police force. They do their best but cannot be present at the Institute except to respond to crises.

Another crisis that is developing is that we now must have a four-year residency in order to keep our residency accredited, and we have funding for only a three-year residency. Many of our services have been staffed to only borderline capacity. These are in the administrative as well as the professional services. The staffing for dietetics and housekeeping was probably adequate for the type of patient that was originally envisioned coming to the Institute, that is, patients who would be predominantly voluntary, would be admitted during the daytime hours, and would usually be treated on a relatively long-term basis. With a largely short-term patient population and many admissions at night and on weekends, these services have proved to be inadequate. In addition, the Institute along with other state institutions, has had to cut existing staff by 6% during the past two years in order to meet the state's funding levels.

By and large, this experiment of creating in Virginia a different type of public hospital has been a successful one. The Institute is no longer "the new boy on the block" and has to find its place in the total institutional system. The experience of many psychiatric institutions in the United States has been that in the early days they developed innovative patterns but, with the multiple demands upon government for many services, gradually withered on the vine, so that they became, at best, mediocre and sometimes low-level operations. The Northern Virginia Mental Health Institute is still operating at a relatively high level of sophisticated treatment and training programs. The next few years will tell whether enough support can be generated from the state and local governments to maintain this institution and keep it responsive to the community that it serves. The next decade will show whether it has drifted into the chronicity and apathy of so many of the public psychiatric facilities in the United States.

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Emergency Service Admissions To a State Mental Hospital

Hana Bruml, PhD, *Falls Church, Virginia,*
and Cheryl King, MA, *Dartmouth, Maine*

The Northern Virginia Mental Health Institute assigns ten beds to the emergency referrals of a Fairfax County mental health center. The authors analyze these admissions over a 15-month period.

THIS study is an analysis of the population which used ten beds of a state mental hospital assigned to an emergency service of a county-comprehensive community mental health center, in the suburbs of a large metropolitan area. One is supported by the County of Fairfax, the other by the State of Virginia. The state hospital is the Northern Virginia Mental Health Institute (NVMHI), a short-term, intensive treatment, 120-bed establishment.

The Emergency Service is a part of the Woodburn Center for Community Mental Health (WCCMH), one of three Fairfax County mental health centers. The Emergency Service is open 24 hours a day, 7 days a week. Through an affiliation agreement, NVMHI provides ten beds with a full range of inpatient services. The short walking distance between the two facilities makes the arrangement practical. In some cases, inpatients who were previously in treatment at WCCMH continue their treatment with their primary therapists at WCCMH and walk over for their appointments. Prior to discharge, WCCMH's staff makes arrangements for followup for the patients who belong to their Fairfax catchment area. Other patients may be referred to mental health centers (according to their residence) or referred for other treatment in either private or public sector.

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Submitted 2-17-78.

Results

The agreement started with five beds on September 1, 1974, and after four months was extended to ten beds. During the period for which data are available and analyzed, September 1, 1974 through November 30, 1975, WCCMH's Emergency Service had a total of 3,585 emergency contacts; of these contacts, 163 (4.5%) were referred to NVMHI. Seven of the 163 referrals were double referrals, i.e., seven patients were referred twice within the period under study. Thus, 156 different patients were admitted.

Of the 163 referrals, 78 (48%) were males and 85 (52%) were females. Fairfax County residents accounted for 125 (77%) of the referrals and residents of other counties or states accounted for 28 (23%). The patients tended to be of younger ages, especially males: 123 (76%) of all referrals were below 35 years of age. These data are similar to the age distribution in the previous analysis of NVMHI by Bruml and Copen.[1]

The referred population is representative of the suburban population of the area: 95.5% white; 19% from military families; 62% of various Protestant religions; 30% Catholic; 5% Jewish; 41% single; 28% separated or divorced; 26% married; 3% widowed. The educational level was high.

Out of the 153 patients for whom data are available, 50 (33%) were employed, 50 (33%) were unemployed, 33 (21%) were homemakers, and 20 (13%) were students. Of the 50 unemployed, 21 (42%) were males between the ages of 19 and 25 years.

Nearly half (48%) of all patients reported suicidal ideation, gestures, or attempts with the highest incidence occurring in the age groups of 19-25 and 26-35 years. The ratio of women was almost double in the ideation/gesture category while men were double in ratio in the attempt category.

The maximum length of stay for all inpatients at NVMHI is 4 months and the mean is 21 days. For the WCCMH patients the mean length of stay was 16 days and, in only five cases (3%) did the patient stay in excess of 60 days (1-62, 1-75, 1-87, and 2-92). This shorter mean stay of 16 days may have been influenced by the high number of Against Medical Advice (AMA) discharges within the first week of hospitalization.

Only 39 patients (25%) had no previous mental health treatment. Eleven (9%) had received inpatient treatment only; 26 (22%) had received outpatient treatment only, and 80 (68%) had received both. At the conclusion of this study, six patients were still hospitalized.

Of the 163 WCCMH Emergency Admissions, 25 (15.3%) had been previously treated at the NVMHI. Upon discharge from NVMHI, 43 (26%) were referred to WCCMH for aftercare. Of the 53 patients who left with an AMA discharge, some may have returned to the WCCMH, but they did not have formal referrals. Besides the seven double referrals (within the 15 months under study) there were 19 other patients referred by WCCMH for NVMHI regular admissions; of these, three were refused admission.

More than one-half of the patients (56%) were admitted between 7:00 PM and 7:00 AM (43% in the period of 7:01 PM–1:00 AM and 13% in the period of 1:01 AM–7:00 AM) and Monday tended to be the most likely day for admission (22%) followed by Friday and Saturday (16% each), with Tuesday and Wednesday the least likely (9% each).

Seventy-three (45%) of all patients received aftercare referrals. Forty-three (59%) were referred to WCCMH; 15 (20%) to Northern Virginia mental health centers, and the remaining were referred to various other treatment programs.

Thirty (18%) patients were admitted to NVMHI a second time within the 15-month period covered by this study (seven of those 30 were the double WCCMH Emergency admissions). Three additional patients asked to be readmitted but were refused. Of the 30 patients who were admitted to NVMHI a second time, 13 (43%) had left AMA after their first admission.

Forty-three (28%) of the 156 patients were previously known to NVMHI and were admitted more than once, and 19 were admitted twice between September 1, 1974, and November 30, 1975. The most common diagnosis in this group of patients was schizophrenia.

An analysis of the seven patients who were admitted twice to NVMHI as WCCMH Emergency Admissions shows that they account for five AMA discharges (9.4% of total AMA's), that all but one had previous inpatient treatment (only two at NVMHI), and all but one returned to NVMHI after this study ended. Only three hospitalizations were for longer than 15 days, the longest 2½ months. By and large, this seems to be a chronic population known for multiple needs.

Of the 157 admissions, 53 (33%) were discharged AMA, (26 males and 27 females). Of these 53 AMA discharges, 16 (30%) occurred within the first day, 29 (55%) between the second and seventh days. During the same period, the AMA discharge rate for the NVMHI Regular Admissions was only 17%.

Of the 53 patients who left AMA, 34 (64%) were given a prognosis of guarded and of these, 30 left without medication. Thirteen patients who left NVMHI with an AMA discharge returned within the 15 months under study as a NVMHI regular admission; the patients discharged as AMA do not have, as a rule, aftercare arrangements.

Only 10% of the AMA patients had no previous treatment; 41% had both hospitalization and outpatient treatment (11% NVMHI); 19% outpatient only; 21% hospitalization only. This shows that most of these people who requested AMA discharge (81%) were in treatment and again it points to the possible chronicity of these patients and their willingness to accept treatment.

We may ask if these AMA discharges could be prevented or if these patients should not have been admitted. For instance, the three patients who went AMA within 4 hours of admissions were female, nine reported suicidal ideation, another one returned later as a NVMHI regular admission. Of the seven double admissions, two patients had two short stays, went AMA twice and later were admitted to NVMHI directly. Their hestiancy to come to the hospital and their ambivalence is mirrored in the multiple admissions and discharges.

On the other hand, for some patients it may have been a real crisis-intervention hospitalization, and a few nights away from their home situations may have solved their problem. Nothing short of detailed fol-

lowup research will help to clarify how the service of these two institutions is used.

Conclusions

The ratio of males (48%) is atypically high. The previous study[1] shows 70% females and most other studies of public facilities show a higher proportion of females; 91% of the males were below 35 years of age; 67% of the females were below the age of 35. Thus, atypically, more males were hospitalized and of a much younger age. This is in agreement with statistics published by private institutions. Sheppard and Enoch Pratt Hospital showed almost even distribution between males and females (49.6% to 50.4%), an increasing trend to younger population; 53% of Sheppard Pratt's population was under 30 years of age.[2]

Of the admitted patients, 33% went AMA. This is a very high proportion, especially when compared to the 17% for all NVMHI patients. It is of particular importance that of these AMA discharges, 85% went within the first week. This may be interpreted that they used the hospitalization as an emergency measure and did not want or need prolonged hospitalization.

The employment status was almost equally divided between employed and unemployed. The 25-to-35-year category showed more of the employed and the 19-to 25-year category showed the highest unemployment among the males. The females were about evenly distributed but most of them were housewives, especially in the 26- to 35-year category.

There was a high unemployement category among young males (19-25). This brings into focus the problems of the young males who show up at the emergency service. Most of them are dependent upon others for their livelihood.

It is not surprising that there were 48% who reported suicidal ideation, gestures, or attempts. It is this particular threat that brings people to the emergency room and for protective environment. One-half of the males with suicidal ideation or gesture were below 25 years of age, and so were half of the males who made a suicidal attempt. The females were somewhat older and the greatest number were in the 26-35 year age bracket. On the other hand, women tended to report ideation and attempt almost twice as often as males, but twice as many attempts were made by males. This is in agreement with national figures.

There was no significant difference between the length of stay of patients who had previous treatment in a mental hospital and those who had not; 65% of the previously treated group left within 14 days and 65% of the ones without previous treatment left within 14 days. More than half of the males were abusing either drugs, alcohol or both, whereas only one-third of the females abused either drugs, alcohol or both.

The revolving doors of the hospital as well as of the emergency service are evident. Of the 156 WCCMH Emergency Admissions, 25 were previously treated at the NVMHI, seven patients were double WCCMH Emergency Admissions and 19 other patients returned later as NVMHI regular admissions. Some may use this service to the fullest, others may misuse it, but by and large these patients need care and the repetitious admissions may attest to this need.

For both the NVMHI and WCCMH, a comprehensive followup study to evaluate the full extent of their services is in order. There remains the philosophical question: Can any study truly evaluate the lives that may have been saved or may have been made more endurable because somebody was available to them in their hour of need?

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EEG Changes in Old Age: Normal and Pathological

Carol Anne Rizvi, MD, *Falls Church, Virginia*

A review of the literature reveals that most of the marked EEG changes in the aged are found in conjunction with disease, and the author's experience confirms this observation.

OVER the past 20 years a number of investigators have carried out studies on changes in the EEG which are related to aging. Some of these studies deal primarily with normal individuals; others are chiefly concerned with abnormal conditions, including pre-senile and senile psychoses and neoplasms of the brain.

In reviewing and correlating some of these materials, one of the first facts of note is that the average person of 60-70 years of age shows only very slight EEG changes from the young adult, 51% having normal tracings.[1,2,3] Those changes noted in the remaining 49% include 1) a mean alpha frequency of 9 cps instead of 10 cps; 2) greater than usual focal slow activity over the temporal areas in 10% of subjects (with 95% of this occurring predominantly over the left hemisphere); and 3) increase in low voltage beta rhythm from the precentral region. After 80 years of age there are more marked changes: The alpha frequency becomes 8.5 cps, diffuse theta waves appear, and there is less fast activity.

In one study[4] a comparative assessment was done of 233 elderly psychiatric patients and 261 normal elderly people to determine what effect blood pressure has on EEG. In the normals there was no relation apparent between blood pressure and degree or type of EEG abnormality. Those psychiatric patients with blood pressure elevations showed largely normal EEG's but patients with low blood pressure exhibited diffuse slow EEG abnormality. The conclusion drawn from this was that slight elevations in blood pressure help to preserve normal EEG in the elderly and that this factor is more critical in psychiatric patients who probably have more arteriosclerotic disease.

In another article[5] the authors refer to studies on cerebral circulation and metabolism in elderly people which tend to support the idea that vascular and other pathology have more influence on EEG changes than age per se. For example, they point out that when cerebral blood flow and oxygen delivery fall below a critical level there is an appearance of theta and delta waves. Drop in blood pressure produces a similar effect, as does stenosis of cerebral vessels, thrombosis thereof, or basilar and carotid artery insufficiency.

Cerebral blood flow was studied in 26 normal males 65 to 81 years old and 20 psychiatric patients 67 to 84 years old. EEG's were done on these same subjects within 48 hours of the blood flow tests. The results from these studies showed 22 of the 26 healthy subjects with normal tracings for age. Two showed mild diffuse slowing; one had focal slow waves and another, amplitude asymmetry. Among the patients, 70% showed abnormalities, with the chief disturbance being diffuse slow activity. The authors concluded

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that there was an undoubted relationship between reduced cerebral blood flow and oxygen consumption and the slow activity in senescent EEG's[6] and that pathological processes must limit the blood flow before such changes occur.

Regarding the EEG changes in elderly individuals which represent pathological change, in one study[7] the EEG's of seizure patients are examined. One group of 133 patients whose seizures had begun after age 51 showed a large degree of focal abnormalities, with the chief center in the temporal lobe and with sharp and slow abnormality as a primary finding. Causes for the disturbance were frequently cerebrovascular disorder, brain tumor, and degenerative disease.

Van der Drift and Magnus[8] studied the EEG in elderly patients with space-occupying intracranial lesions. Included in their study were 337 patients with cerebral tumors, 70 with cerebral hemorrhages, 20 with subdural hematomas, and 13 with cerebral abscesses. They differentiated two general types of lesions which they called 1) irritative or compensated and 2) destructive. Into the first category they placed slowly-growing tumors (meningiomas and gliomas), early glioblastomas and early metastases, and chronic hemorrhages. In the second category they grouped advanced glioblastomas and metastases and advanced gliomas located in frontal and fronto temporal regions, acute hemorrhages, acute large subdural hematomas, and acute cerebral abscesses.

They made the following observations on the EEG's.

Alpha activity: In normal elderly people there are irregularities of the alpha rhythm with the main frequency being low. In the irritative lesions the usual elderly alpha activity was maintained plus 1) an amplitude asymmetry in the case of parieto-occipito-temporal tumors, the amplitude being lower on the affected side (In some cases of meningioma, amplitude of the alpha rhythm was increased on the affected side); 2) there was often a frequency asymmetry not seen in younger patients with similar lesions. In destructive stages the authors noted 1) marked signs of EEG drowsiness without clinical signs of drowsiness in the patient, and 2) slow alpha rhythm with low amplitude on both the same and opposite sides, or at times a total bilateral depression of alpha rhythm.

Photic stimulation: In normal elderly persons there is often diffuse following over a wide frequency range. However, in the irritative stage of intracranial lesions an asymmetric occipital response was noted with increased amplitude for lower frequencies on the side of the tumor. In the destructive stage no differences were noted in young and old subjects.

Fast activities: As previously noted there are increases in fast activities in old people up to age 70 and thereafter these decrease.[9] 1) In the irritative stage of intracranial lesions a contralateral beta activity in the range of 20-30 cps was seen. In some there was high frequency of beta activity. 2) Although there was seldom fast activity in patients with the destructive stage; when it did occur it was lower than that seen in younger patients with the same type of lesion.

Mu rhythm: This rhythm is seldom seen in elderly people but was found in 20% of patients over 60 years of age who had the irritative stage of a cerebral tumor.

Epileptiform activity: More epileptiform activity was found in old patients as compared with young ones 1) on the ipsilateral side in irritative stage of glioblastomas; in chronic stage of hemorrhage and with chronic subdural hematomas; 2) bilaterally or on the contralateral side in destructive stages as follows: necrotic glioblastomas, malignant astrocytomas and oligodendroblastomas or hemorrhage in a glioblastoma, acute hemorrhage, sometimes with deep hemisphere tumors.

Frontal intermittent rhythmic delta activity: This 1½ to 2½ cps rhythm is sometimes seen over one or both hemispheres in persons with diffuse serious ischemic disturbances. It was seen ipsi- or bi-laterally more often in old than young patients with the irritative stage of 1) hemisphere tumor, 2) chronic hemorrhage, or 3) slowly developing subdural hematoma. It was also seen contralaterally in the destructive stages of 1) frontal tumor (sometimes centro-parietal or temporal), and 2) acute hemorrhage.

Polymorphic delta activity: In the elderly in irritative stages of intracranial lesions there was 1) more diffuse ipsilateral delta activity of low voltage than in younger patients; 2) less local delta activity above age 60; 3) frequent ipsilateral temporal delta activity with centroparietal, medio- and baso-frontal tumors and tumors of the anterior part of the corpus callosum. In the destructive stage it was noted that more bilateral diffuse delta activity occurred.

In addition to this study, there have been studies on the senile dementias: Alzheimer's, Pick's and Jacob-Creutzfeldt diseases. One such study noted polymorphic theta-delta activity with traces of absence of alpha in Alzheimer's. In Pick's disease alpha was preserved in 50% of the cases studied. Only one case of Jacob-Creutzfeldt was reported in which diffuse moderate EEG disturbances were noted.[10]

Sleep studies showed normal elderly people to have EEG patterns similar to those of normal adults. The senile, delirious, or demented elderly subjects showed various abnormalities, especially decrease or absence of eye movements.

Findings.

The author has surveyed the records of all individuals aged 60 and over admitted in the past ten years to an acute, intermediate-term, psychiatric hospital. Of 261 such patients admitted, 30 had EEG's obtained as part of a diagnostic evaluation to determine the possible presence of organic brain disease. Of these, 47% had normal tracings; 35% showed a mean alpha frequency of 8-9 cps instead of 10 cps. One case, a woman of 75 who had experienced a cerebral vascular accident three years earlier, had a mildly abnormal tracing due to excess left hemisphere slow activity. A 60-year old man who had experienced head injury with removal of a blood clot from the right frontal area one year earlier had an abnormality consisting of fast spiky focus in the right frontal region. (It was noted in this case, however, that the electrode was placed over a burrhole). A third mildly abnormal EEG in a 60-year-old woman showed hypersynchronicity with some lateralization of sharp theta activity to the left side. These abnormal EEG's represented about 1% of the total. Although the sample is small, these findings tend to reflect the experience of other workers in the literature reviewed.

Conclusions.

On the whole, most studies to date point up the fact that in the aging individual, so long as his vascular system is adequate and no serious space-occupying or other pathological lesions occur to impair cerebral function, the EEG changes very little up to 70-80 years of age, and the changes thereafter in a healthy old person are chiefly slowing of the alpha frequency, diffuse theta, and a diminution of fast activity. Most of the marked or striking EEG changes in the aged are found in conjunction with disease: cerebro-vascular impairment, space occupying lesions, injury or the like. Low blood pressure is more likely to give rise to EEG abnormality than mild to moderate blood pressure elevation.

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British General Practice and the National Health Service

Patrick W. Kelley, *Charlottesville, Virginia*

Three weeks of observing a general practice group in Edinburgh, Scotland, affords the author a study in contrasts between British and American practice today.

SINCE 1948, the British National Health Service (NHS) has been the main method of health care delivery in the United Kingdom. It is a unique form of socialized medicine, intended to meet all medical needs for all British people.

For three weeks during the summer of 1977 I had the privilege of observing an eight-man general practice group in Edinburgh, Scotland. Some aspects of the NHS I learned about were low pay for all health workers, conservative testing procedures, long waiting lists for hospital admission, small fees for certain services, and the postponement of capital investment to replace aging facilities.

First of all I was amazed of how much work the NHS can get done for a pittance. The average GP takes home only about $16,000 per year and some surgeons may make no more than $36 for a 3½-hour operating session.[1] Wilman reported in 1976 that the average cost per patient day in a local district general hospital was only about $40.[2] Drugs are also a bargain, with some trade name preparations costing less than half their cost in this country.

I was surprised at the infrequency of such tests as PAP smears. Although in the US it is recommended that women be examined at least annually, in Edinburgh the recommendation is every five years. The British do not believe that the US policy is cost effective in the light of available scientific data.

Long hospital waiting lists are signs of stress on the system. In 1971 people in England and Wales waited 14 weeks on the average before hospital admission;[3] presently there are almost 600,000 people waiting, with 40,000 classified as "urgent".[1] The wait for an elective hernia repair may be longer than five years. With limited facilities and staff, the clinician must be selective and tends to favor admitting patients whose outcome is hopeful. To cope with the backlog the British are making good use of outpatient surgery and day hospitals.

The NHS was founded with the idea of granting health care the status of a "right" and thus making it free and equally available to all. Much to the aggravation of the idealists, however, it soon became necessary for patients to pay a small amount for certain items. For example, prescription drugs were initially free, but now each prescription costs the patient

Presented at the Family Practice Weekend of the Virginia Academy of Family Physicians, March 18, 1978, Charlottesville.

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The paper here published won first prize in a medical student competition at the Family Practice Weekend sponsored in the spring in Charlottesville by the Virginia Academy of Family Physicians. Seven students from the Primary Care Teaching Program of the University of Virginia presented papers; the prizewinner, Mr. Kelley, is Class of 1980.

This was the first of three Weekends to be held annually at Virginia's three medical schools; the next is slated for the fall at the Medical College of Virginia, Richmond. For this first Weekend, Dr. Gene E. Clapsaddle, Roanoke, was chairman of the Academy's committee on arrangements, and Dr. B. Lewis Barnett, Jr., chairman of the University of Virginia's Department of Family Practice, was responsible for putting the student program together. Dr. C. Knight Aldrich is coordinator of the University's Primary Care Teaching Program.

about 40 cents, although over 50% of the population is exempted on the basis of age, pregnancy, or other factors. Patients also pay a nominal fee for services such as vaccinations and the filling out of certain forms.

Unfortunately, the NHS has never conquered the problem of making the service equally available to all. Certain locations have always been less desirable and a guaranteed income does not always draw physicians into these areas. The NHS has set up financial inducements to encourage doctors to practice in deprived areas, but these sums are fairly small.

Capital investment has been low in the NHS: 50% of the hospital beds are in buildings built more than 70 years ago and only about 18% are in new and replacement buildings provided by the NHS.[3] Capital investment is now increasing, however, with the brightening economic picture in Britain.

Although the NHS is highly bureaucratic and limited in resources, I observed many exciting aspects of general practice in Edinburgh. I found one of the most attractive aspects to be the National Health Service's commitment to primary care.

In the NHS every person is placed on the list of a GP of his choice. All medical problems are brought first to the GP, who serves as the NHS gatekeeper, determining if the demand for health care qualifies as a real need. The GP then decides whether to handle the problem himself or refer the patient to a hospital consultant. Through this system the British internist, pediatrician, and obstetrician-gynecologists have been essentially removed from the primary care role.

One aspect of British general practice which I found unfortunate was the schism between the hospital and the GP. I think a GP has much to bring to an inpatient situation, but in most cases the referral letter seemed to signify the complete turning over of responsibility to the consultant and his staff.

British GPs contract with the NHS to provide care in a certain area. Other than this they are relatively free of NHS influence except through complaint investigation and prescription monitoring. (In 1974, 2,000 GPs were visited by Regional Medical Officers to discuss possible excessive or otherwise unusual prescribing[4]).

The pattern of medical practice was somewhat different from what I have observed in a similar experience in this country. Housecalls play a major part in a British GP's practice; the doctors I observed each averaged about 4 housecalls a day. Many of the office visits were solely to get forms signed that would permit a patient to return to work after an absence of any duration for any illness. The initial office workups in the United Kingdom last only 8½ minutes on the average[5] compared to 15 minutes in this country. As a result, the history and physical and laboratory examinations appeared to be less comprehensive than in the US. Since personal finances are not a consideration in the British system, frequent followups are easier to arrange and may help to justify a shorter initial workup.

The British GP is compensated by the NHS through basic capitation fees paid for every patient on his list. This fee is 30% higher for those over 65. The doctor gets a basic practice allowance, and 70% of office worker salaries are covered by the NHS. The physician is also awarded an extra amount for certain services, such as birth control advice and house calls done between 11 PM and 7 AM. Many British GP's supplement their modest incomes by "moonlighting" in industrial medicine, nursing homes, or emergency rooms.

GPs are often assisted by state-provided District Nursing Sisters, Health Visitors, and District Midwives, whose status is more equal than subordinate to the physician. The District Nursing Sister has essentially replaced the old-time practice nurse. Her work includes office duties as well as house calls in the community. In the office her functions include routine nursing tasks, minor lab work, and seeing patients who are unable to get an immediate appointment with the doctor. I found these nurses very helpful and reassuring to patients. They were conscious of their limits and did not hesitate to call the doctor away from consulting for advice. Out in the district they served as effective extensions of the phy-

sician, giving injections, changing dressings, and so forth.

The Health Visitors are a cross between nurses and social workers. They work out in the district, primarily visiting elderly patients with sociomedical problems. By law they must visit young families periodically to monitor the quality of home life and advise parents. Health Visitors also conduct weekly walk-in and scheduled baby clinics at the office, with a doctor on call for special problems. At these clinics infants are weighed, vaccinations are given, developmental steps are recorded and advice given as required. I thought the Visitors gave a high quality of care.

The midwives help to conduct prenatal clinics with the GP. In Britain prenatal care is usually given up to 30 weeks' gestation, mainly in the GP's office. After this women attend hospital clinics.

Despite its problems the NHS delivers at least adequate health care to most of the population. There are many aspects of this comprehensive system that we would do well to study, both to avoid some of the British pitfalls and to improve certain aspects of the American system. It is essential that we learn all we can about other forms of health care delivery as our own country seeks alternatives to our present system.

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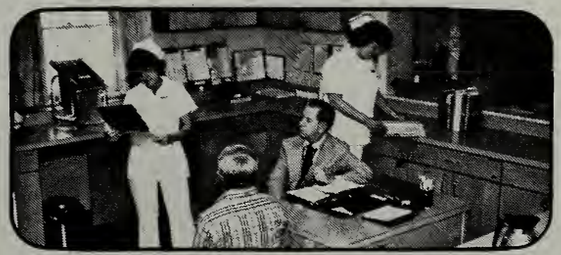
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Kinloch Nelson, MD (right), for whom the Student Honors Day program at the Medical College of Virginia is named, congratulates Neal S. Gaither, Class of '80 and winner of first prize in this year's 10th annual Honors Day competition. Behind them is the Medical College of Virginia Hospitals building. Doctor Nelson was Dean of the Medical College of Virginia when the program in its present form was initiated. Mr. Gaither's winning scientific paper appears on the opposite page. *Photograph by Bob Strong.*

STUDENT HONORS DAY

Six medical students presented scientific papers at the Kinloch Nelson Student Honors Day program on May 4 at the Medical College of Virginia. The paper awarded first prize is presented below, with abstracts of the other papers. Listed in the credits with the student authors are their faculty supervisors.

Ancient Patterns of Sensory Organization Retained in the Midbrain. NEAL S. GAITHER (M-80) and BARRY E. STEIN, PHD.

The superior colliculus is involved in the integration of input from various sensory modalities in order to facilitate the orienting toward, and the following of, external stimuli. In infra-mammalian vertebrates the homologue of this structure is the optic tectum. It, too, is required for orienting and following behavior. Recent studies in the superior colliculus have demonstrated the existence of an orderly, map-like (topographic) representation of visual and somatic input. It is believed that this topographical organization is of selective advantage and that is is critical for the fundamental role of the colliculus. Until this time, however, it has not been known whether or not this multi-sensory organization of the midbrain represents an adaptation which is unique to the mammal.

The reptile *(Iguana iguana)* was chosen for study because of its strategic interposition between the amphibia and mammalia on the evolutionary scale. Animals were prepared for surgery with hypothermia and repeated local infiltration of all surgical areas with a long-lasting anesthetic (Zyljectin). The posterior aspect of the optic tectum was exposed and each animal was paralyzed and artificially respired. The contralateral eye was centered upon a large, translucent plastic hemisphere which represented the visual field. Electrophysiological microelectrode recording techniques were utilized to study the sensory representations in the optic tectum. For each electrode penetration it was possible to localize (on the plastic hemisphere) a discrete area of the visual field in which a spot of light produced a neuronal response. This area was defined as the visual receptive field for that electrode penetration. In similar fashion those areas of the body from which neuronal responses were evoked by touch were defined as the somatic receptive fields.

Numerous electrode penetrations were made in the exploration of the sensory representation of the tectum. In a given electrode penetration, cells responsive to visual stimuli were encountered in the superficial layers of the tectum and cells responsive to somatic stimuli were found in the deeper layers. Visual cells were topographically organized and there was a pronounced magnification of the central ten degrees of the visual field. At greater eccentricities, progressively less tectum was devoted to geometrically equivalent areas of the visual field. The body surface was also represented topographically in the tectum and the visual and somatic representations were in register.

In general, cells with visual receptive fields within the central ten degrees or nasal to the vertical meridian were found to overlie cells with somatic receptive fields on the face. Cells with visual receptive fields in more temporal regions of the visual field were found to overlie somatic cells with receptive fields more caudal on the body. Furthermore, the magnification of the central visual field was paralleled by a magnification of the face, two representations most important in exploratory behavior and predation. This organization is virtually identical to that found in the mammal. Thus, our present observations reveal that this overlap of sensory representations is not a new evolutionary development; rather, the presence of an organization of multisensory input to the midbrain appears to represent one of natures earliest attempts at the integration of cues from different senses in a given region of the brain.

The visuotopic-somatotopic overlap in the midbrain represents an ancient plan whose effectiveness is attested to by its retention in widely divergent species living under significantly different ecological stresses.

The Synthesis of D-Lactate in Human Blood. S. A. SIEGEL (M-80) and R. B. BRANDT, PHD.

Szent-Gyorgyi and others have suggested that methylglyoxal (MeG) has a role in cell growth. Metabolism of MeG to D-lactate (not the L-lactate of glycolysis) is catalyzed by the enzymes glyoxalase I and II with glutathione as a coenzyme. Elevated levels of D-lactate may show formation or utilization of MeG as an indicator of abnormal growth.

We have developed an assay for D-lactate using D-lactate dehydrogenase for spectrophotometric analysis of NADH. Human blood was added to tubes containing fluoride or heparin and the plasma analyzed for D-lactate. When whole blood was incubated at 37°C with fluoride, significant amounts of D-lactate were synthesized under conditions where glycolysis was inhibited. This is consistent with our previous finding that dihydroxyacetonephosphate is a precursor of MeG and that the glyoxalase system is active in the red blood cell. We believe this is the first report on the formation of D-lactate in human blood.

Experimental Infective Endocarditis in the Rat. CLINTON ADLAI TURNER (M-80), GORDON ARCHER, PHD, and SMITH SHADOMY, PHD.

The objective of this study was the development of an animal model in the rat for the study of infective endocarditis. This was accomplished by insertion of stylets or catheters, via the right common carotid artery, directly into

the left ventricles of anesthetized rats followed by intravenous inoculation of 10^8 cells of *Streptococcus viridans* (12 animals) or *Candida parapsilosis* (2 animals). Infected animals were observed over a period of 2 weeks with individuals animals being sacrificed periodically. This procedure invariably caused IC which was characterized by pericarditis with prominent vegetations around the stylets and on ventricle walls which, upon culture, contained 10^4 to 10^7 organisms/gram of tissue. Other pathology included lesions in liver, spleens and kidneys. These results demonstrate that a reproducible IE model can be developed in the rat. Such a model has significant potential value in development of newer diagnostic and therapeutic modalities for IE in humans.

Efficacy of Sympathectomy in the Treatment of Frostbite. J. Paul Waymack, MD (M-78), Francis Delmonico, MD, D. Glenn Turley, BS, and Robert W. Barnes, MD.

To assess efficacy of sympathectomy on experimental frostbite, 24 rabbits had cold immersion of both ears (−25°C), rapid (42° water bath) or slow (room air) rewarming, and subsequent (1-72 hours) sympathectomy of the left ears. Daily assessment included ear temperature, photoplethysmographic recordings of ear pulse amplitude and gross photographs of tissue necrosis.

Sympathectomy resulted in only transient (48 hour) increased ear temperature (35.6 ± 0.9°C vs. 32.8 ± 1.3°C, ± S.D., $p < 0.01$) and pulse amplitude in ears which survived (27 ± 12 mm vs. 12 ± 6 mm, $p < 0.01$) and those which autoamputated (47 ± 22 mm vs. 17 ± 10 mm, $p < 0.05$). Tissue injury was symmetrical, with bilateral ear autoamputation in 6 rabbits (slowly rewarmed), bilateral ear cartilage necrosis in 3 (1 slowly, 2 rapidly rewarmed) and no tissue damage in 10 (rapidly rewarmed). We conclude that sympathectomy does not affect tissue salvage in experimental frostbite despite transient increase in microcirculation.

Platelet Dysfunction Caused by Various Penicillins. Clarence Pearson, MD (M-78), G. D. Qureshi, MD, and James F. Stubbins, PhD.

Findings of severe hemorrhage and prolonged bleeding time in two patients receiving high dose penicillin and nafcillin prompted us to examine the effect of penicillin and penicillin analogues on platelet function. Various amounts of the drugs were added to normal platelet rich plasma (PRP) to achieve final concentrations of 0.8, 1.4 and 3.0 mM penicillin; 2.9, 5.9 and 11.8 mM carbenicillin and 5, 10, 20 mM nafcillin. The mixture was tested for platelet aggregation using ADP (5 uM) and epinephrine (10 uM) by the method of Born. Results showed that each of the penicillins inhibited the platelet aggregation. The inhibition with penicillin was 40%, 56% and 86%, with carbenicillin 56%, 82% and 98% and with nafcillin 8%, 82% and 94%, respectively. This inhibitory effect of penicillin was reversible, since the penicillin-treated platelets after gel filtration demonstrated normal aggregation. In similar experiments, the inhibitory effect of aspirin (ASA) was found to be irreversible since ASA-treated platelets after gel filtration did not show restoration of their function. We conclude that in patients with platelet dysfunction caused by penicillins, the platelet abnormality is most likely secondary to physical adsorption of the drugs on platelets, and may be corrected by removal of the drugs from circulation. Platelet transfusion in these patients may not be effective since, in the presence of circulating penicillins, the transfused platelets may acquire similar dysfunction.

Familial Corticomedullary Dysplasia: a New Form of Autosomal Recessive Hypotrichosis. Regina Gargus (M-80), Peter Mamunes, MD, and Edward Abell, MD.

Congenital hypotrichosis varies considerably in both its clinical presentation and its genetic mode of transmission. Only the autosomal recessive form is confined to involvement of body hair and of the few such cases reported, only one shows any similarity to the case herein presented. Our family consists of three siblings (two boys aged 9 & 6 and one girl age 1), all of whom were born without any visible scalp or body hair. Body hair has subsequently developed in the boys, but their scalp hair remains very short and is vellus in appearance. Their other ectodermal derivatives are normal. Their parents are normal and nonconsanguinous, and the family history is negative.

Horizontal and vertical scalp biopsies from the two boys demonstrate that the major defect is a gross failure of many follicles to form recognizably normal hair. In some units, no integrated cortex and medulla are produced, while in others these structures are present but are grossly distorted, dystrophic and disorganized. The outer root sheaths are essentially normal but the inner root sheaths in dystrophic follicles are deficient. All of the hair matrices (bulbs) are small, many are diminutive, and they are set very shallow in the scalp tissue at the subcutaneous-dermal junction, allowing them to be removed easily. The amino acid content of the parents hair is normal, but in the boys' hair the levels of proline and cystine (normally found in high concentration in the hair matrix) are below the normal range. Serum amino acids are normal in both the parents and the boys.

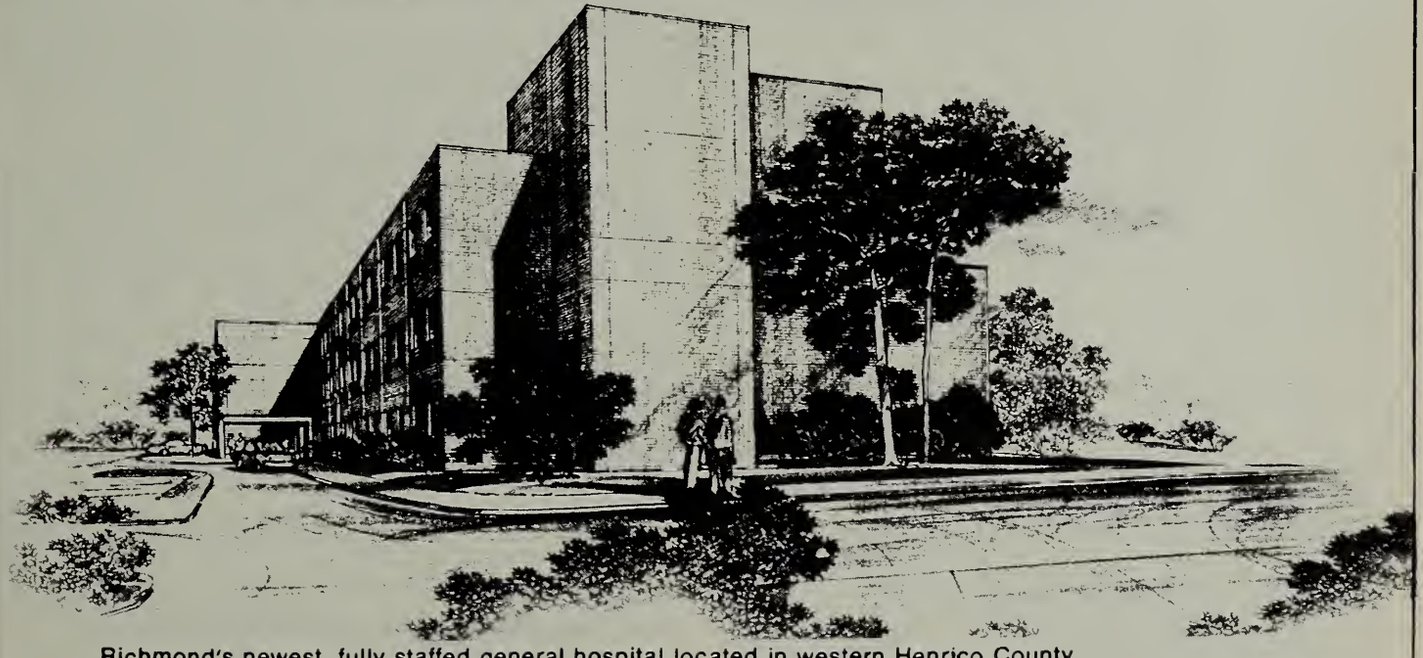
We are still in the process of attempting to further define the biochemical and histological abnormalities in this condition, which we have entitled familial corticomedullary dysplasia.

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Treatment of Open Fractures: A Review

Landon B. Anderson, MD, *Charlottesville, Virginia*

The history, etiology, initial management, and definitive treatment of open fractures is comprehensively reviewed. The author explores with particular care the crucial problem of preventing infection.

AN OPEN FRACTURE is one in which there is a break in the skin and underlying soft tissues which leads directly into the fracture or its hematoma. It is no longer called a compound fracture. At present, division is made between open fractures as defined above and closed fractures in which there is no break in the skin.

"The primary objective in the management of an open fracture is union with the prevention or eradication of wound sepsis."[1] Treatment is directed toward preventing infection in the soft tissues. "The degree to which that can be effectively managed may well determine the ultimate outcome for the bone."[1]

The circumstances peculiar to open fractures which make them particularly susceptible to infection includes innoculation with bacteria; stripping or destruction of soft tissue, making the wound more susceptible to infection; and loss of soft tissue, which may affect the way the fracture can be immobilized or alter the bony repair process.

Although the ancients had theories and methods for managing open fractures, the biggest advancement came in the 15th and 16th centuries, when Brunschwig and Botello advocated the removal of non-vital tissue from wounds that did not progress properly. In the 18th century Pierre Joseph de Sault advocated making a deep incision to explore the wound, remove dead tissue and provide drainage. It was he who adopted the term "debridement", although he used it to mean an incision to release purulence.

Dominique Jean Larrey, a pupil of de Sault's, extended de Sault's principles to include debridement as soon after the wounding as possible. This is the essence of treatment as it is practiced today.

The next major advancement was Lister's introduction of carbolic acid dressings. This was the beginning of modern aseptic care and the use of antibiotics. Prior to Lister, mortality from open fractures has been estimated at 40%. In 1934 an article from Massachusetts General Hospital reported an infection rate as high as 25%.[2] Trueta, in the Spanish Civil War, practiced thorough debridement in 1,073 open fractures and reported excellent results.[3] He left all his wounds open.

It has been in military endeavors in this century that most advances have been made in the treatment of open fractures. In World War II the policy of debridement and leaving the wound open was established. Sulfa drugs were introduced during World War II, but were used locally and were not terribly effective. Antibiotics were used during the Korean War.

Etiology

An understanding of the etiology of open fractures may help in deciding upon the proper course of treat-

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ment. $K = MV^2/2$ is the essential equation underlying what is usually an unexpected application of a violent force to the human body, where K is the kinetic energy, M is the mass and V is the velocity of the wounding force, although the human body may be the moving force. This equation is especially helpful in understanding the effect of missiles on soft tissue and bone. Missiles have a small mass but a high velocity; the higher the velocity, the greater the problem. The dividing line between high and low velocity weapons is a muzzle velocity of 610 meters per second.[4] High velocity missiles have a muzzle velocity greater than 610 meters per second and include all rifles except the .22. Low velocity missiles with a muzzle velocity below 610 meters per second include all hand guns except the 357 Magnum. High velocity missiles do their damage especially to muscle and liver because of the incompressibility of liquids. Liver and muscle contain a great deal of water compared to the air-filled lungs.

The shotgun shell usually contains a large number of small pellets. Although they are intended to scatter at the target distance, initially they move from the gun barrel in a rather dense group called a shot cloud. If, while still quite closely packed, they strike a target, their collective impact may be somewhat like that of a bullet. However, each pellet has so much less kinetic energy than a bullet they are soon expended. The greatest danger from a close-range shotgun wound is the shell wadding. This is a bit of material often made of jute or hair compressed with a binding agent. It pushes the shot down the barrel when the powder behind it is ignited. It is less dense than the shot and tends to fall behind, but follows the shot cloud for several feet. It often enters the wound in a close range shotgun wound. It must be removed. It should be searched for in any close range shotgun wound.

Another interesting group of potentially difficult wounds are those incurred in a tornado. These are virtually always contaminated by finely dispersed soil. This often carries anerobic pathogens. Some authors make an interesting comparison of rotary lawn mower injuries, saying that they have been created by a minor tornado.

Initial Management and Treatment

Open fractures are often incurred in the multiply-injured patient. The airway and the cardiovascular status are always of first importance. Once these have been taken care of, a thorough physical exam to assess the full extent of possible injuries and a thorough exam of the affected extremity should be done.

The examiner next looks at the open fracture wound. The extent of this exam may be debatable. Gregory, in Rockwood and Green's textbook on fracture treatment, has this to say:

> *Since formal debridement is indicated for obviously open fractures, there is not much justification for the digital exploration of such wounds in the emergency room. . . . There remains a number of cases in which a small wound in the skin overlies a fracture and immediately the question arises: "Does it communicate with the fracture site?"*[5]

The answer may be obtained with a sterile probe or gloved hand. However, one may not find the proper plane and then still not know the correct answer. Therefore, "if there is any suspicion at all that a wound may communicate with an adjacent fracture it should be dealt with formally."[5] This means irrigation and debridement of the wound under aseptic conditions.

Brav, in an American Academy of Orthopaedic Surgeons instructional course lecture in 1956, said, "The wound of every open fracture should be debrided, regardless of its size, etiology, or the time between injury and definitive treatment. This rule should be inviolable; there should be no case of open fracture where treatment of the wound is limited to simple application of a dressing."[6] One exception to this might be a low velocity missile wound. Howland reported on 105 injuries resulting from low velocity missile wounds in which there was no debridement, and he had only two infections.[4] There are no good studies showing the efficacy of formal irrigation and debridement versus local treatment only, since almost no one would advocate local treatment only. However, one study in 1975 from Miami involving 386 gunshot wounds showed an infection rate of 14% with only local treatment and 6% with formal surgical exploration.[7] However, no division was made between high velocity versus low velocity gunshot wounds or close range gunshot wounds.

Tetanus can be prevented. Tetanus toxoid is highly effective and its administration results in excellent protection. There were no cases of tetanus in the US Army where all were immunized from 1956 to 1971.[8]

The National Health Service Advisory Committee on Immunization Practices advised DPT (dyptheria, pertussis, tetanus) immunization in children from 2 months to 6 years. This is given intramuscularly, three doses at 6-week intervals, and the fourth at one year. Following initial immunization one dose is given every ten years.[8]

The Committee on Trauma of the American College of Surgeons in 1972 recommends: 1) A tetanus toxoid as a booster after injury if one has not been received in the last five years; 2) Passive immunization with *human* tetanus immune globulin, if not pre-

viously immunized or in an especially tetanus-prone wound. The dose is 250 to 500 units; 3) Initiation of active immunization at the same time as passive immunization for future use.[8]

Gas gangrene is a complication of open fractures. Clostridial infections are not due to any uniquely pathogenic strain but rather to uniquely local circumstances. Therefore, the most important prophylactic step is meticulous and complete removal of any necrotic tissue. These anerobic bacteria do not thrive except in the wound with non-viable tissue.

Use of antibiotics has also been demonstrated to be of value in the prevention of gas gangrene. Penicillin is the antibiotic of choice in dealing with this disease. However, as we shall see later, other antibiotics are probably indicated in the treatment of open fractures, and these are also effective in the prevention of gas gangrene.

In a study by Patzakis in 1974, there were two cases of gas gangrene (clostridial myonecrosis) out of 310 patients.[9] It is of interest that in his group, treated with cephalothin, he had one patient who fell from a horse and had three positive cultures for clostridia but no infection.

Splinting is another important part of initial fracture management. Brav in 1956 said, "There is still a tendency to disregard the expressive aphorism, 'Splint 'em where they lie.' "[6] In the occasional patient it may be necessary to apply some type of emergency traction to an extremity to reduce shock and improve local circulation. In the great majority, however, simple splinting without traction is adequate.

A culture should be taken of the wound before any treatment. Patsakis has shown in a prospective study that 72.7% of the organisms causing infection were present on the initial culture.[9]

The wound should be covered with a sterile dressing until such time as formal debridement can be carried out.

Should systemic antibiotics be used? Gustillo and Anderson found 70.3% of open wounds had positive cultures initially. They therefore said, "We consider the routine use of antibiotics in open fractures as therapeutic rather than prophylactic." They felt that the best single antibiotic as suggested by sensitivity studies was cephalothin. They have gradually reduced the time of antibiotic coverage from 10 days to 3 days. They state that they have shortened the time that they use antibiotics based on the recent studies pertaining to clean surgery. At the present time and since 1974 they have been using cephalothin for 3 days. They do continue antibiotics until 3 days after the wound is closed if the wound is not closed primarily.[1] Patsakis published a study in 1974 providing a great deal of information concerning antibiotic treatment in open fractures. He did a prospective study of 310 patients and treated them with cephalothin; or penicillin and streptomycin; or nothing for 10 days. There was no difference in the location of the fractures between the groups. He took four cultures; one before treatment, one during surgery, one prior to closure, and one of the wound after closure. Of the 310 patients, 64.5% had positive cultures. All wounds were cleaned with betadine and sterile dressings were applied in the emergency room. All were debrided in the operating room and irrigated with 10 litres of saline. All were closed primarily except high velocity missile and close range shotgun wounds. There was no difference from the time of injury to surgery in all groups. With the control group (no antibiotics) 13.9% became infected. In the penicillin and streptomycin group 9.7% became infected. There was no significant difference between these two groups. However, in the cephalothin group 2.3% became infected. The cephalothin group's infection rate was statistically significant from the other groups. Part of the difference in the effectiveness of the antibiotics is the sensitivity of the organism to the antibiotic. In Group 2 (penicillin and streptomycin) 62% of the pathogens cultured were resistant to those antibiotics. In Group 3 (cephalothin) only 20% of the pathogens isolated were resistant to cephalothin.

There is some other interesting data included in this study; the tibia was the most common site of infection, with 12 of 22 (54.5%) of the infections in the tibia; 11 of 22 infections (50%) went on to osteomyelitis; 11 of 22 infections (50%) were due to coagulase-positive *Staphylococcus aureus*. Organisms causing infection were present on the initial culture in 72.7%. Of the infections involving gunshot wounds, 75% were due to close range shotgun blasts.

Patzakis noted three cardinal factors influencing the infection rate: The presence or absence of a pathogen in the wound if no antibiotic was given; the presence of a resistant pathogen if an antibiotic was given; the type of missile.

Although in this study the antibiotics were given for 10 days, Patsakis has now reduced that time to 5 days intravenously and 5 days PO.[9]

Several other studies have reported no benefit with the use of antibiotics: Copeland and Enneking, 1965;[10] Epps and Adams, 1961.[11] However, both of these used penicillin and streptomycin. The above studies showing benefit with the use of intravenous antibiotics have used cephalothin. However, more recent work may indicate that cephazolin is superior to cephalothin. A study in 1977 shows that cephazolin has a higher total peak level in bone, a longer half life, and a higher serum level than either cephredine or cephalothin.[12]

Gregory still reiterates, ". . . but for the present it is essential to say that antibiotics are not to be used in lieu of proper debridement and definitive wound care. These must remain as always an adjunct to the principle."[5]

Prepping the limb prior to surgery should follow a prescribed technique. Gregory suggests that,

> *prepping a limb that has an open fracture is properly biphasic. The first phase should cleanse the intact skin about the wound. Since harsh agents such as an organic solvent may be required, the open wound should be protected throughout this phase by appropriate sterile dressings. When the intact skin has been suitably cleansed a new set up should be available for dealing with the wound itself. . . . Scrubbing exposed tissues with detergents or agents such as pHisoHex for the purpose of sterilization is untenable. Additionally, the caustic effect of some prep solutions plus the trauma to cells produced by scrubbing can only cause more of them to be destroyed. If gross and visible contaminants are present they are better plucked from the wound with an instrument or debrided with tissue.*[5]

Some research has been done in this area at the University of Minnesota. In 1969, Edlich published a study wherein a contaminated wound in an animal model was irrigated (not scrubbed) with 70% ethyl alcohol, benzalokonium chloride, .25% chloramine, aqueous iodine, tincture of iodine, providone-iodine, or crystal violet, and this provided significant protection against the development of frank infections.[13]

In 1971, Custer, Edlich, et al published a report on betadine scrub and pHisoHex.

> *Surgical scrub solutions were harmful to the wound and had no apparent therapeutic value. Treatment of contaminated wounds with surgical scrub solutions increased the wound's susceptiblity to bacterial infection. The deleterious effects of these surgical scrub solutions on the wound appeared to be the result of their detergents. The antiseptic agent in the surgical scrub solution exerted a favorable influence on contaminated wounds but did not eliminate the harmful effect of the detergents.*[14]

Gregory suggested that the removal of wound detritus, especially necrotic tissue and foreign material, achieves its best results when carried out immediately. Although Cox and Evans found no difference in infection in wounds treated before or after 12 hours, they thought that perhaps a more thorough debridement was carried out at the later time because the necrotic tissue was more obvious.[15]

Brav called 6 hours the golden period in which one could close an open fracture. He, however, felt that antibiotics had extended this time from 6 to 12 hours. Although closure may be affected by the time elapsed from wounding to definitive care, irrigation and debridement should be done regardless of the time elapsed.[6]

Gregory lists several objectives of debridement. These are: the detection and removal of non-vital tissue; the detection and removal of foreign material, especially organic foreign material; reduction of bacterial contamination; and the creation of a wound whose viable tissues can cope with residual bacterial contamination.[5] Brav states, "Removal of all necrotic muscle tissue is perhaps the most important part of the debridement procedure."[6]

Scully, writing in the *Archives of Surgery* in 1956, is often quoted. He correlated gross examination of muscle with histology. His guidelines for debridement of muscle were color, consistency, contractility, and capacity to bleed. He found that consistency and capacity to bleed were most significant. Not all non-contractile muscle is non-viable. He found color to be the least helpful.[16]

Brav suggests:

> *Grossly contaminated bone must be cleansed and debrided as thoroughly as possible. Small bone fragments which will not interfere with bone continuity should be removed if they are entirely separated from soft tissue attachments. Large fragments, however, which would, if removed, seriously interfere with bone continuity should be retained even if they have no obvious source of remaining blood supply.*[6]

Brav again states: "If there is a situation more difficult to deal with than non-union it is an infected non-union."[6] Some judgment is needed.

Witschi, in the *Journal of Trauma,* commented on 84 open, comminuted tibial fractures from the Vietnam War: "Removing comminuted fragments, even those with no soft tissue attachments, may lead to a segmental defect and commit the patient to prolonged reconstruction and possible amputation." All of his patients had comminuted fractures, all united, but seven had osteomyelitis. He did not remove the comminuted fragments.[17]

Skin can often be easily sacrificed when debriding. Yet care must be taken in those areas where it is not redundant, such as the face, wrist, hand, ankle and foot. One should not core the wound but use eliptical excisions. Thought should be given to the need for extension and the best direction to extend. A counter incision may be helpful to provide cover or drainage. In high velocity missile wounds, Gregory suggests that the incision for exploration equal in length the diameter of the limb at that level.

Foreign bodies should be removed, especially or-

ganic foreign bodies and, in particular, wadding from close range shotgun wounds. Lead should be removed if in a joint. Leonard in *Clinical Orthopedics* in 1969 noted that joint fluid breaks down lead, leading to a synovitis and a low-grade lead poisoning.[18] It may be appropriate at this time to repeat Gregory's admonitions concerning open joint wounds: "Any wound that enters a joint mandates exploration."[5] Use the principles of other open fractures.

A fasciotomy should be considered in forearm and leg wounds.

A tourniquet should be applied to use if needed. However, it is not generally recommended that a tourniquet be used, although one author suggested that post-tourniquet blush could be useful to help decide about tissue viability.[5]

Management of open fractures with damaged vessels that have been repaired has been controversial. The need for internal fixation has been stressed in the past. Several studies from Vietnam have shown that plaster casts with transfixing pins, traction, posterior splints, or spicas, do as well as internal fixation in immobilizing fractures following arterial repair.

Connally from Vanderbilt published 36 cases in the *Journal of Bone and Joint Surgery* in 1971 of femoral or popliteal arterial injuries secondary to fractured femurs or tibias. Thirteen patients had technically adequate arterial repair. Seven of these had internal fixation and six had skeletal traction. One in each category had a non-union. None of these patients had problems with circulation. Connally concludes:

> *In addition to the absolute necessity for a technically successful restoration of the peripheral blood flow the key determinants of survival of the limb in this study included the length of the delay prior to repair, the extent of the disruption of collateral circulation, the amount of associated soft tissue damage, and the presence or absence of infection.*

Connally also did a laboratory experiment with 30 dogs in which he fractured the femur and did an arterial repair. He found that 18 kilograms of traction gave no disruption of the suture line. He measured flow before and after, with and without traction. He concluded: "The chief determinants of the flow consistently proved to be the amount of narrowing created by the repair. If flow was decreased to 50% these dogs had obliteration of flow with as little as 4.5 kilograms of traction."[19]

Following debridement, almost everyone would agree on the necessity for irrigation. How, how much, and even with what, is subject to some discussion.

Most authors use saline for irrigation. It is difficult to say how much. Enneking in 1965 used 10-20 liters.[9]

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Gustillo, who has written extensively on open fractures, found in 1969 that in 511 open fractures, when he used less than 10 liters the incidence of infection was greater than if he used more than 10 liters. Gustillo mentions a jet pulsed stream, but states its rightful place remains to be established. He does say that he has decreased the amount of time and decreased the amount of irrigation used by one-half by the use of jet lavage.[20]

Most of the published work on the use of jet pulsed streams has been done by dentists. Gross in 1972 at Walter Reed did a study on crush wounds in the rat mandibular area, putting soil in the wound before crushing the tissue. He used a pulsating water jet with 70 psi for 30 seconds (this is a modified Water Pik manufactured by the Teledyne Aquatec Corporation). Gross found that the amount and extent of inflammation and abscess formation was proportional to the amount of foreign material present. The water jet was, however, more effective in removing debris and necrotic tissue. He also showed that adding antibiotics to lavage fluid enhanced its efficacy.[21]

Does irrigation with antibiotics help? Nachamie in 1968 published a study using just neomycin in clean orthopaedic wounds and saw no difference in infection rates.[22] Several other authors in the orthopaedic and general surgical literature have shown benefit from topical antibiotic irrigation.

One article in *Military Medicine* compared saline, tetracycline, and vancomycin-streptomycin in rats and showed a vancomycin-streptomycin combination helpful in reducing infections.[23]

Casten in *Surgery, Gynecology and Obstetrics* in 1964 in experimental wounds in rats showed an 88% infection rate if saline irrigation was used, a 10% infection rate if one million units of penicillin in 100 milliliters of saline was used for irrigation, and a 3% infection rate if 2-1/2 million units of penicillin in 250 milliliters of saline was used. He also reported a clinical study comparing saline and penicillin in clean and contaminated wounds. In the clean wounds the infection rate was 3.5% treated with saline compared with .27% treated with penicillin. In the contaminated wounds he had a 7% infection rate compared with a 2.4% infection rate using saline and penicillin respectively.[24]

Waterman in 1968 used powdered cephalothin. He contaminated wounds with streptococcus, staphylococcus and *E coli*. In his control group there was a 100% infection rate. With treatment of cephalothin powder no wounds became infected with streptococcus; 12.5% of the wounds became infected with staphylococcus; 15% became infected with *E coli*.[25]

If one is going to use topical antibiotic irrigation, which drug should be used? Bingham lists several criteria: solubility, penetration of surface layers, bacteriocidal rather than bacteriostatic, lack of toxicity, slow penetration of deep tissues, and potency. He chose kanamycin because of its low toxicity and broad spectrum (only a rare pseudomonas is resistant). This rare resistance of pseudomonas could be controlled by the addition of polymyxin B. He used one gram of kanamycin and 500 milliliters of sterile saline and reported no wound infections in 700 orthopaedic and general surgical operation in three years. This was not, however, in open fractures. He does feel that cephalothin also fits these same criteria, but quotes a study by Hopson in 1968 where kanamycin was significantly better than cephalothin against both staphylococcus and *E coli*.[27]

The next question to be answered in dealing with open fractures is whether or not to close the wound. Brav states, "It is desirable to transform an open fracture into a closed one at the earliest moment consistent with the safety of the patient."[6] Gregory outlines the possibilities. First, there is the question as to whether the injury is so severe as to require amputation or can the extremity be saved. The second option, if the extremity is not to be amputated, is, first, primary closure with suture or, second, primary closure with skin graft or flap, or, third, leave open. If option #3 is chosen, then one should further consider delayed primary closure (this would occur within the first week before granulation tissue is present), or delayed skin graft or flap, or secondary suture or graft (this would occur after the onset of granulation tissue), or allow the wound to close by secondary intention (this is allowing the wound to granulate in), or split thickness skin graft with later excision and closure by suture.[5]

The wound will heal better if closed primarily if there is no complication. Therein lies the problem. Pus may form under the closed wound.

Different authors have established criteria for closure. As we have noticed earlier, Patzakis closed all except high velocity missile and close range shotgun wounds.[9] Brav states that the size of the wound is of no great consequence, but the etiology of the wound is of paramount importance. He never closes gunshot wounds or wounds where there is gross contamination. He also does not close wounds that are greater than 12 hours old. However, he does add that wounds that cannot be closed primarily should all be considered at the end of 4-7 days for delayed closure.[6] Gregory lists the following criteria for primary closure:

1. All necrotic tissue and foreign bodies must be removed.
2. Circulation must be normal.

3. Nerve supply must be normal.
4. The patient's general condition must be satisfactory.
5. The wound should be able to be closed without tension.
6. There should be no dead space.
7. The patient should not have injuries in several systems.

Gregory feels that if any of these criteria are in question primary closure is contraindicated. He does make a distinction between closure and cover and states that some structures need to be covered, i.e., bone devoid of periosteum, tendons devoid of their sheaths, articular cartilage, damaged ligaments, nerves or arteries. One may be able to use a relaxing incision to provide cover. Gregory suggests a dressing change from 4-6 days before granulation tissue develops to decide on the possibility of delayed primary closure.[5]

Gustillo and Anderson published a study concerning primary closure of open fractures in 1976. They looked at 673 open fractures retrospectively. This was a motley group. All had irrigation and debridement. All were treated with antibiotics, either streptomycin and penicillin, chloramphenicol and penicillin, or oxacillin and penicillin. Primary internal fixation was used intermittently. They closed the wound whenever possible. In looking at their results they found that they had a 5% infection rate with the 495 fractures closed primarily and a 20% infection rate with the 44 closed secondarily. However, the secondary closures were in the most severely injured patients—those with segmental fractures and extensive soft tissue loss. In one subgroup, 21 patients with open segmental tibial fractures with associated extensive soft tissue loss, there were 16 that were treated with primary closure and the infection rate was an impressive 44%.

Because of the success of their primary closures, they looked at a second group of 352 fractures prospectively. They established a grading system for the wounds (this was similar to a grading system used by Veliskakis in 1959):

> Type 1 fractures are open fractures with the wound less than 1 cm long and clean.
> Type 2 fractures are open fractures with a laceration greater than 1 cm without extensive soft tissue damage.
> Type 3 fractures included open segmental fractures, fractures with much soft tissue loss, traumatic amputations, gunshot wounds, any open fractures caused by a farm implement, and any open fractures with a vascular injury.[28]

They closed all fractures in Groups 1 and 2 and left all fractures in Group 3 open. All were treated with irrigation, debridement, and antibiotics (oxacillin for 3 days). No internal fixation was used. They reduced their overall infection rate from 5.2% to 2.4%. They had eight infections: Two Type 2, six Type 3. Type 3 wounds had an infection rate of 9.9%. This could be compared to the 44% infection rate in the retrospective study for closed Type 3 wounds in tibias. Three of the eight infections were associated with vascular injuries. Five of the eight infections were felt to be secondary to leaving the wound open for greater than 2 weeks. There were 78 Type 1 fractures with no infections. There were 181 Type 2 fractures, with two infections (an infection rate of 1.1%). There were 67 Type 3 fractures with six infections (an infection rate of 9.9%). Gustillo and Anderson concluded: "If there is the slightest doubt in the surgeon's mind as to whether there has been adequate debridement of the wound, the fracture should not be closed regardless of the type of open fracture."[1]

Fracture Management

Some consideration must next be given to how to manage the fracture itself; whether with plaster, pins and plaster, weight-bearing, traction, external skeletal fixation, or internal fixation. It is the last of these, internal fixation, that is the most controversial.

Brav suggests that the infection rate with internal fixation of open fractures is considerably higher, but ". . . the type of patient whose fracture cannot be immobilized adequately in any other way may do well following thorough debridement and a modified type of internal fixation which leaves the wound wide open for drainage.[6] Brav reports on ten femoral fractures treated with IM rods and left open. Three had slight persistent drainage after 2 years. That, of course, is a 30% incidence of chronic osteomyelitis.[6]

Gustillo in 1971 treated 194 tibial fractures with pins above and below and casting and had a 7.2% infection rate. With primary metallic fixation in 34 fractures, he had a 20.6% infection rate. In femurs he treated in traction, he had a 4.5% infection rate in 44 patients compared to a 16% infection rate with primary internal fixation in 18 patients.[29]

Veliskakis published a report of 80 patients with tibial fractures treated with primary internal fixation and wound closure. He divided his wounds into three types similar to what we have previously discussed. He had 12 Type 1 fractures, and the only complication he had with these was a minimal skin loss in one. He had 63 Type 2 fractures, and he had four superficial and five deep infections; four had minimal and two had moderate skin loss, and ten developed nonunion. He had five Type 3 fractures. Four became

infected, one superficial and three deep, and three had extreme skin loss.[29]

Therefore, the literature would seem to indicate that infection rates are higher with primary internal fixation and that primary internal fixation is not necessary when dealing with arterial injuries.

Summary

An open fracture is one in which the fracture communicates with the air through an opening in the skin and soft tissues. The objective of treatment of open fractures is to get union without infection.

After the patient has been thoroughly assessed, the following routine is suggested by a review of the recent literature. The wound is not explored in the emergency room. It is cultured. It is covered with a sterile dressing. The limb is splinted. Tetanus prophylaxis is given. Antibiotics are begun, either cephalothin or cephazolin. Formal debridement is a must and should be done as soon as possible, with the possible exception of low velocity missile wounds. After thorough debridement, the wound should be irrigated either copiously (10 liters) or with a jet lavage. Consideration should be given to irrigation with an antibiotic solution, either kanamycin plus or minus polymixin B, or cephalothin. Primary internal fixation should probably not be used. Primary closure of the wound is appropriate in Type 1 or Type 2 fractures, but not in Type 3. All wounds should be considered for delayed primary or secondary closure.

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Regional Neonatal Intensive Care: Its Benefits Can Now Be Measured

Peter W. Houck, MD, *Lynchburg, Virginia*

In 1972 the Virginia State Fetus and Newborn Committee endorsed the concept of regionalized newborn intensive care (RNIC) for purposes of education and transport. A national task force recently defined perinatal Levels 1, 2, and 3 for the purpose of providing hospital personnel and service guidelines for state regional planning.[1] Level 1 guidelines are minimal standards for services primarily for uncomplicated maternity and newborn patients in smaller community hospitals. Level 2 units provide a full range of maternal and neonatal services for uncomplicated patients and for the majority of complicated obstetrical problems. Level 3 hospitals provide further care for the serious types of maternal, fetal, and neonatal abnormalities.

For the past five years Region III (HSA districts 11-14), which utilizes Lynchburg's Level 2 and neonatal services has been developing a program for the 7,000-8,000 annual newborn births in the area.

Are RNIC services being utilized by Region III?

The total number of transported newborns has increased from 25 in 1973 to 91 in 1977. Our transport team will transport infants from our region either to our Level II unit or to a Level III unit if a higher level of intensive care is needed.

Although the number of transports in our region tripled in these five years, one would assume a much greater actual number of high risk infants from the six hospitals in our region would need intensive care. If one assumed 5% of the 5,000 annual births (outside Lynchburg) needed RNIC, then 250 newborns would be needing transport services, which is three times the number transported in 1976. It is a known fact that many neonates are being transported to Level 3 units by ground transport in North Carolina, and, also to Level 3 units by air, but the actual number is not known. Another factor is that various hospitals will keep high risk infants requiring intensive care in their own hospitals, depending on the nature and severity of the neonatal disorders.

Our data clearly demonstrates that utilization of neonatal transport is on the rise in Region III.

How does one measure the impact of RNIC?

The information in this report is based entirely on neonatal survival rates. If neonatal survival is improving, one would conclude RNIC is making an impact. The problems in interpreting the reliability of survival rates are whether to use the statistics from the regional hospitals or by place of residence. If place of residence is used, there is a fallacy in that many regions have mothers who go to another region

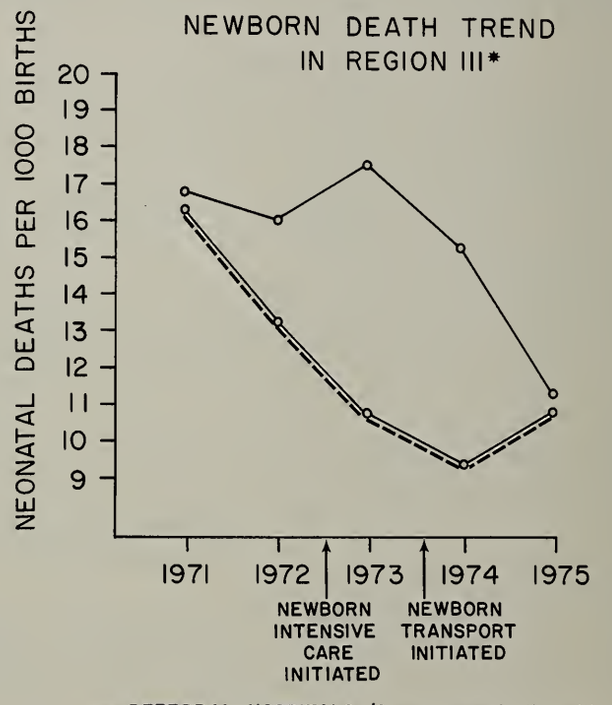


Figure 1.

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Submitted 12-22-77.

to deliver their baby and vice versa. Therefore, a newborn death which occurred in one region may not relate to the place of residence in another. Also deaths at home or en route to the hospital are included in these death figures, which do not reflect conditions in the hospital. Hospital death statistics are confused by the fact that they do not include the death of a baby referred to another hospital.

However, the fact that hospital deaths of the newborn are declining more rapidly than the Virginia state death rate is a sign that newborn transport services are being utilized. Figure 1 demonstrates that there was a significant decline in both hospital deaths and deaths by residence of the newborn in Region III, although they were not simultaneous. (This data does not include the Lynchburg District II data, so as to separate the impact of intensive care locally and regionally.) An additional measurement of the impact of RNIC would be to evaluate morbidity of the RNIC survivors, and the perinatal death rate which would evaluate morbidity of the RNIC survivors and include stillbirths after 28 weeks gestation. This would be a better indicator of conditions prior to birth. However, at present our only index is the neonatal survival trend.

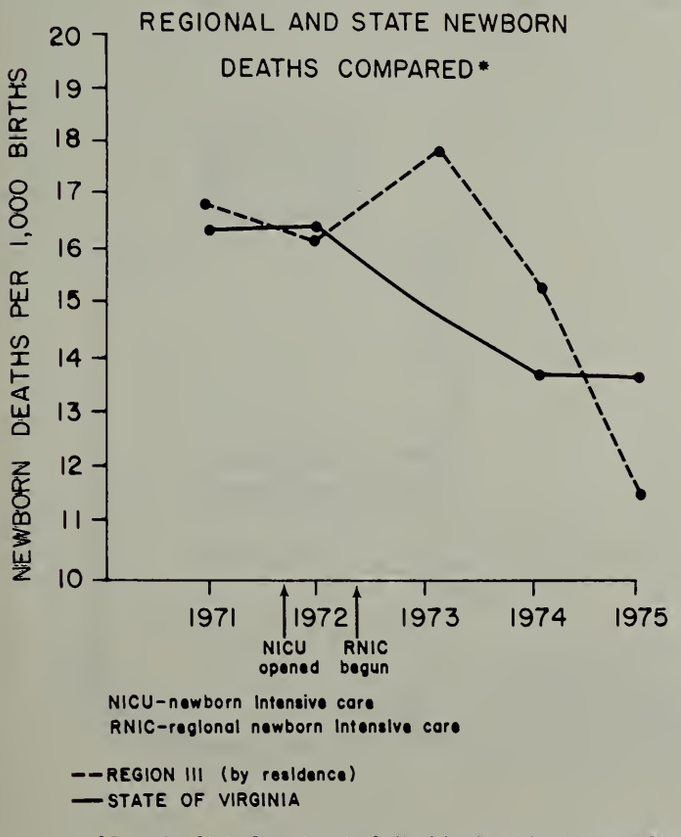


Figure 2.

What are the comparative neonatal mortality trends in Region III?

The local newborn death rate in District II demonstrated a 51% drop in newborn deaths from 1971 to 1975 and has held at that level; and, as Figure 2 shows, the newborn death rate in Region III began a sharp descent in 1973 until, in 1975, it was well below the state newborn death rate. This is also well below the national rate.

Although a wide gap continues to persist in the local and regional death rates, it is not likely to close until further perinatal education programs are funded, and transport services and utilization are improved.

Summary

Region III was the first area in Virginia to develop neonatal transport and education to rural locations, as reported previously in this journal.[2] There appears to be a growing acceptance of RNIC services in Region III with a simultaneous drop in neonatal mortality rates below national and state levels; however, until regional neonatal mortality rate is more equal to the mortality rates in the central hospital, RNIC cannot be said to have made its full impact.

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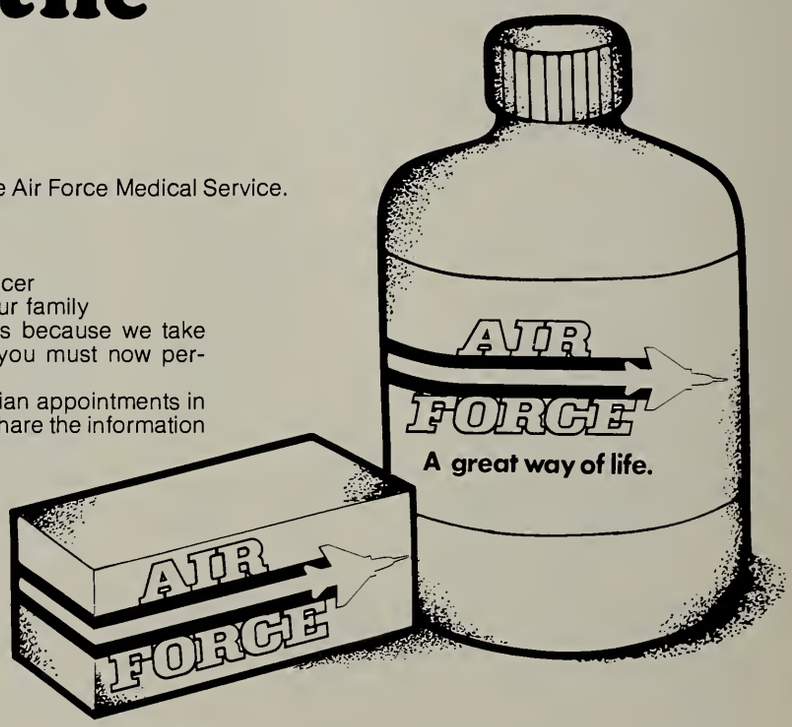
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BOOKS

An Atlas of Normal Developmental Roentgen Anatomy, by Theodore E. Keats, MD, and Thomas H. Smith, MD. 848 pages, 779 illustrations. Chicago, Year Book Medical Publishers, 1977.

The authors, Theodore E. Keats, MD, and Thomas H. Smith, MD, have drawn upon their personal knowledge, understanding of developmental anatomy, and, more significantly, their personal observations, experiences, and consultations with all kinds of radiographs to publish this extremely complete compilation of examples of normal developmental anatomy. The authors state in their preface: "Decision-making in diagnostic radiology is experience-dependent, in that it requires a proper mental set for what is normal for the given anatomic part under observation at a particular age and for a particular sex." Though this *Atlas* will not be read in the traditional sense, it will serve as a ready reference to the puzzled radiologist or clinician in his everyday practice.

One of the most difficult aspects of diagnostic radiology is the determination of normality versus abnormality—normal variant versus pathologic lesion or anatomic alterations from some disease process. Only with the proper mental set, perseverance and professional inquisitiveness have such elusive decisions been made by diagnosticians.

The use of X-rays makes possible this first photographically complete text of normal human anatomy as it developes from the newborn to adulthood (25 years of age). This monumental text encompasses 779 excellent quality illustrations detailing sequentially radiographic anatomic development of the skull, spine and pelvis, extremities, chest, abdomen, and gastrointestional and genito-urinary systems.

The meticulous commitment to reproduce quality radiographs is very apparent at each stage of development depicted, be it at any of the three-month intervals up to the age of 2 years, or the sex differences at any year up to adult maturity. This *Atlas* bears testimony to the old adage—a good picture is worth a thousand words; to that we must add, tremendous personal experience and knowledge to select the proper radiographs that demonstrate the distinctive, yet subtle, but normal developmental changes.

Dr. Theodore Keats of the School of Medicine of the University of Virginia in Charlottesville is in the unique position of having perviously authored two books that indeed paved the way for this *Atlas*; in addition to enhancing his commitment (or mental set), these previous books served as resources in the development and documentation of the importance of the variances of normality characterized in part by age and sex difference. Dr. Keats is recognized nationally as an authority in diagnostic radiology for normal variants and developmental anatomic changes. Often he is called upon as a consultant in this broad field; these consultations provide the author additional opportunities and resources to better understand and depict such normal variances.

The inability to differentiate between a significant pathologic alteration and an elusive normal developmental finding on a radiograph can lead to severe consequences; this *Atlas*, therefore, is certainly a reference text that every diagnostic radiologist will want beside his view box.

M. Pinson Neal, Jr., MD

NCHS Growth Curves for Children, Birth to 18 Years, United States, Series 11, Number 165, Vital and Health Statistics, US Department of Health, Education and Welfare, 74 pages. Washington, US Government Printing Office, 1978.

This publication was produced in response to a 1974 recommendation from the National Academy of Sciences urging that new growth charts for infants and children be prepared using current data for nutritional assessment of populations of infants and children in the United States. Data has been collected from the ongoing National Health Examination Surveys conducted as a prospective probability study of the United States population over the last ten years, and from the Health and Nutrition Surveys.

The methodology is described and results detailed in comprehensive tables and charts with seven percentile curves (5th, 10th, 15th, 50th, 75th, 90th, 95th).

Fourteen growth charts have been produced. Four for boys, four for girls aged birth to three years. Three for boys, three for girls aged two to 18 years. Tables cover stature, body weight, and relationship between body weight and stature.

Discussion of the reliability and applicability of this data is included.

This is a publication that should be a basic reference for all physicians and health personnel working with infants and children and having an interest in the effects of nutrition. For a copy, write to the Superintendent of Documents, US Government Printing Office, Washington DC 20402, and ask for DHEW Publication (PHS) 78-1650.

C. M. G. Buttery, MD



VIRGINIA MEDICAL

EDITORIAL

Free Clinics: The Forgotten Alternative

THERE seems to be an inexorable force drawing the medical profession towards socialized medicine. Powerful, well-heeled and vocal opponents of the medical free enterprise system appear to possess the capacity for marketing socialism by airing carefully chosen statistics and playing up deficiencies within medicine as it exists today. It is probably more realistic than pessimistic to prophecy that socialized medicine in some form will prevail in the future—aren't we all making a mad rush to join PSRO's in order to grasp some sort of handhold on a sinking ship?

Perhaps because of the mental images they conjure up, free clinics have been largely ignored as an alternative to socialized medicine. Say "free clinic" to most physicians and vivid perceptions of murky, pot-smoke-filled waiting rooms arise. The surreptitious physician hurriedly completes another illegal abortion on an unwed mother and slinks off to prescribe narcotics for one of his many addict patients. This is overdrawn, perhaps, but there does seem to be a definite set of prejudices triggered by mentioning free clinics. It takes little imagination to rationalize those prejudices. The free clinics first appeared in 1967, engaged principally in the treatment of drug addicts. And the phrase "volunteer organization" evokes images of poorly compensated mayhem, slipshod manner and directors frazzled by the undependability of the volunteer workers.

Yet the Free Clinic of Roanoke Valley, for one, stands as proof that volunteer organizations can be the epitome of order and dependability. I know. I work there.

It would be of interest to consider free clinics conceptually for a moment. Stated somewhat differently, one might ask, "Is there a method by which the free clinic concept might generate a legitimate, effective medical facility which could fit proudly into the continuum of existing medical sources"? The answer is definitely "yes." The potential for this is so vast that free clinic networks—properly conceived and implemented, might hold much of the answer towards halting the trend towards socialized medicine.

One of the strongest, most marketed arguments for government intervention is the notion that thousands of people cannot avail themselves of adequate medical treatment because of insolvency. Need we abrogate our free market control of medicine in order to solve this problem? The cure appears more ominous than the affliction! It is in answer to this need that the free clinic presents its most impressive potential. Many physicians see the free clinics as simply one more agency offering "free medicine"; a thoroughly redundant agency because of the plethora of *other* health care agencies operating for the benefit of the poor. This is one of those notions which seems logical, but just isn't so. If it were so, and there are so many resources for the poor, why does the idea of socialized medicine, which, among other things, intends to help the poor, generate such credibility?

Shortly after opening, our facility was inundated with referrals from the very agencies we were allegedly duplicating. The other agencies are unable to handle the flood of needy patients. The free clinic fills

Opposite page: At the Free Clinic of Roanoke Valley.

the void composed of the "working poor" and the transient patients who, because of their transience, have no time to establish a working relationship with a physician and opt to use emergency rooms or various private physicians for their medical care, usually leaving unpaid medical bills in their wake. Alternately, these patients might seek help from already over-burdened health departments and not be able to receive care for weeks. Often the patient cannot use free facilities at all because they cannot get off work without losing an entire day's pay (or their job) due to the exclusively daytime hours of medical care facilities. The free clinic's evening hours are a lifesaver to these patients.

Having certified the fact that there are many poor patients—patients who exist on the margin of solvency—who can purchase routinely available medical care only by enduring disasterous budgetary consequences, the free clinic develops a plan for growth. In its best expression, the free clinic will endeavor to offer sound general medical therapy of high caliber to those patients who cannot afford, either by personal funding or Medicaide-Medicare, to purchase these health services regarded as basic by us all: routine medical-dental examinations, vaccinations and treatments for daily ailments. There is a standing local free clinic directive *not* to accept as patients those who have the resources to purchase health care from existing resources. The free clinic is *not* erected or conceived to compete with established physicians or institutions.

The philosophy of helping the medically disenfranchised did not begin with the free clinics. Physicians have been extending solace to the poor for decades, usually in a very quiet, low-key fashion. Physicians do not need or wish publicity for these activities. Most physicians, then and now, hold that helping the poor is part of their professional responsibility. Free clinics provide an excellent opportunity for physicians to continue to help the poor—those who cannot afford medical care—in a clean, well-run, clinically contemporary setting. The physicians need only devote a given number of hours per year to their free clinic to ensure good quality medicine. Their own practice may then be scheduled with patients who can afford to pay and the physicians practice is much more financially sound.

The functional benefits are: 1) The physician devotes time to the less well-to-do and ensures good medical care by his own participation. He enhances the effectiveness of his *pro bono* service by working in *one* facility. 2) He is able to remove from his less affluent patients the stigma of being a "freeloader" or "charity case," and shows the patient that, as his physician, he cares that the patient is being saddled with mounting medical debts. He can refer the patient to a well-run clinic and allow the patient to stop accumulating medical debts without sacrificing the quality of care. 3) The physician's bad debts are significantly reduced so that his charity work doesn't result in a net loss to his income.

While it is true that many may regard the above as unnecessarily commercial, it merely serves to point out the pragmatic benefits of such a facility in a fashion which may not otherwise be appreciated. Most physicians don't view work with indigent patients as cost effective in any sense of the word. Yet, a well-set-up free clinic can make helping the poor *less cost ineffective!*

Theoretically, we are on solid ground so far. A legitimate inquiry at this point might be, "What do you consider a well-run free clinic? I've seen some I wouldn't set foot in."

Admittedly, there are a host of free clinics which, for whatever reason, smack of an underground, conspiratorial facility catering in a haphazard fashion to radical and dissipated societal elements. A more palatable image of a free clinic might be evoked by realizing that many are run by clean, intelligent, concerned professionals and lay people and do not deserve prejudicial judgment. To envision a standardized medical record and filing system, hygienic surroundings and decent equipment might go a long way towards alleviating bias. To realize that many free clinics are professionally staffed by community physicians, nurses, pharmacists, dentists and lab technicians might provoke the idea that free clinics may indeed by a valid option to socialized medicine.

A well ordered clinic for the poor is conceived in virtually the same framework as any good medical facility: proper, current medical therapy is accented, organizational control is outlined and adhered to, appropriate agencies such as the State Board of Pharmacy are invited to the clinic to structure its manner and method. A well ordered free clinic may contain more therapeutic modalities than any other medical facility in the area: medical, dental, pharmacologic, birth control counseling, psychological counseling, lab work and appropriate referrals.

When well supported by community medical professionals and directed by a physician and active board, the free clinic may be developed to the extent that it may be proudly regarded as a vital extension of the medical community. It has the inherent ability to generate much more medical care for the dollar than any form of socialized medicine.

JOHN M. GARVIN, MD

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VIRGINIA MEDICAL OBITUARY

William Grossman, MD

Dr. William Grossman, Franklin, President of The Medical Society of Virginia 1969-1970, died July 23 at Southampton Memorial Hospital, Petersburg. He was 68 years old.

Born in Chesterfield County, Virginia, Dr. Grossman was graduated from the University of Virginia School of Medicine and served medical and surgical internships there. After earning a master's degree in public health at Johns Hopkins University, he joined



WILLIAM GROSSMAN, MD
PRESIDENT, 1969-1970
THE MEDICAL SOCIETY OF VIRGINIA

the State Health Department, first as epidemiologist and then as director of the Bureau of Communicable Diseases, leaving the latter post to serve overseas with the army and the air force in World War II.

Emerging from military service as a lieutenant colonel, Dr. Grossman returned to the University of Virginia, finished a pediatric residency in 1947, and then began the private practice of pediatrics in Petersburg and Franklin.

Dr. Grossman was a leader wherever he contributed, in medicine or the community, local or statewide. He had been a member of the Petersburg City Council; chief of staff of the Petersburg General Hospital; chairman of the Board of Virginia Medical Service Association (now Virginia Blue Shield), the Governor's Advisory Committee on Medicare and Medicaid, and the Virginia Comprehensive Health Planning Council; and president of his Rotary Club. Many voluntary efforts claimed his energy, including the Red Cross and the YMCA, and he was an elder in his Presbyterian church.

In the biography published in this journal when he assumed the Society's presidency, the writer prophesied, ". . . his leadership will be sincere, stimulating, vigorous, and we are in good hands." The prophecy proved absolutely accurate, and Doctor Grossman is remembered by those who served near him with great pride and affection.

William P. Gilmer, MD

Dr. William P. Gilmer, retired Clifton Forge radiologist, died July 4 at the age of 88. He was a graduate of Hampden-Sydney College and a 1916 graduate of the Medical College of Virginia.

Dr. Gilmer received battlefield decorations for valor in World War I, served as a medical missionary in Korea, and practiced radiology at the C&O Hospital in Clifton Forge before retiring. He was a member of the American College of Radiology and had belonged to The Medical Society of Virginia since 1928.

T. N. Barnett, MD

Dr. Thomas Neill Barnett, who had practiced medicine in Richmond for nearly half a century, died June 26. He was 86 years old.

Dr. Barnett was graduated from the Medical College of Virginia in 1915. He had belonged to The Medical Society of Virginia for 62 years and was a long-time member as well of the American College of Gastroenterology and the American Society of Internal Medicine.

A. W. Douglas, MD

Dr. Alonzo Watt Douglas, Newport News, died May 30 at the age of 65. Dr. Douglas was a graduate of Meharry Medical College, Nashville, Tennessee. A general practitioner, he belonged to the American

Academy of Family Physicians as well as The Medical Society of Virginia.

E. F. Hinchman, MD

Dr. F. Ernest Hinchman, 82, general practitioner in Richmond for 57 years, died July 9. A graduate of the Medical College of Virginia, Dr. Hinchman opened his office in 1921 and was still seeing patients at his death. He was a member of The Medical Society of Virginia's 50-Year Club and belonged as well to the Virginia and American Academies of Family Physicians.

L. J. Stetson, Sr., MD

Dr. Lawrence J. Stetson, Sr., chief of radiology and former president of the staff of Louise Obici Memorial Hospital in Suffolk, Virginia, died June 30 in DePaul Hospital, Norfolk. He was 58.

A native of Auburn, Maine, Dr. Stetson was a graduate of Bates College, Lewiston, Maine, and Tufts Medical School, Boston. He served as a captain in the Army Medical Corps during World War II and then trained in radiology at the University of Illinois Research and Educational Hospital in Chicago. A member of The Medical Society of Virginia for 26 years, Dr. Stetson was a member also of the Tri-County Medical Society; American Medical Association; American Board of Radiologists; Radiological Society of North America; Virginia Chapter, American College of Radiology; and the National Board of Medical Examiners.

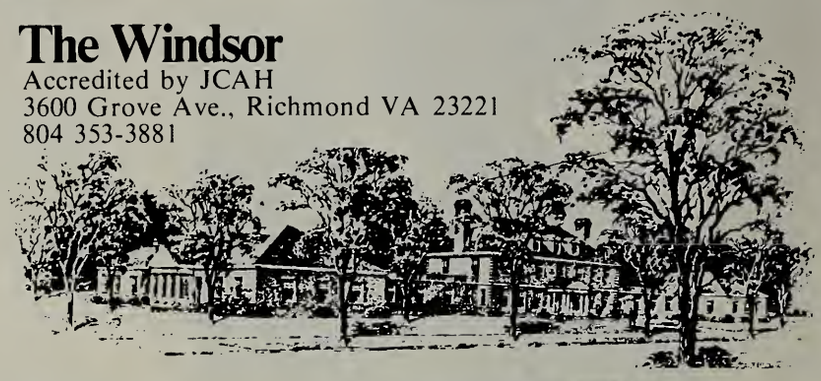
Kalford W. Howard, MD

Dr. Kalford Wall Howard, Portsmouth, died July 14 at a Portsmouth Hospital. He was 91 years old. A native of Brunswick, Georgia, Dr. Howard was graduated from the University of Virginia School of Medicine in 1917 and was a member of the Cofounders Club of the University's Medical Alumni Association. He practiced medicine in Portsmouth from 1919 to 1974. His membership in The Medical Society of Virginia spanned 58 years.

Harry Harrison, MD

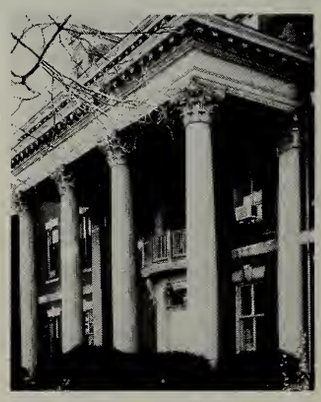
Dr. Harry Harrison, Norfolk general practitioner, died September 3, 1977, at the age of 89 years. Dr. Harrison earned his medical degree at the University College of Medicine, Richmond, graduating in 1911. His membership in The Medical Society of Virginia was continuous for 65 years.

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WHO'S WHO IN VIRGINIA MEDICINE

On every reasonably temperate weekday morning, Dr. **Theodore Bliss** strides out of his *Norfolk* home, hops into his rowboat, and paddles to work. It's a two-mile stint as the oars fly, and Dr. Bliss is 67 years old. As he rows along the Lafayette River, he listens to tapes of Mozart music and looks (in warm weather) much as he does in the photograph on this page. The rowboat is a 17-footer; Dr. Bliss also owns a racing shell.

Rowing has jogging beat coming and going, according to Dr. Bliss as quoted in a feature story in a recent edition of the Norfolk *Virginian-Pilot*: "It's the one sport in which virtually every muscle in your body is used. It's far better than jogging and swimming. Rowing is a real exercise. Jogging is a strain. I don't believe it's as good for people as they've been led to think.

"I row virtually every day, even on weekends. The only time I don't row is when it's raining or terribly windy."

Dr. Bliss has been a rowing enthusiast since his childhood in England. His wife, Dr. **Reba N. Gwyneth Bliss**, is English by birth, too; both attended the University of London. They came to Norfolk in 1947 and share an office as general practitioners. Dr. Theodore Bliss is also a licensed attorney, but he does little legal work now.

Rowing is on the upsurge along the waterways in the Tidewater area, the story in the Norfolk paper reports. Dr. Bliss finds that healthy.

"It's the absolute best participant sport there is," he says. "I feel as good as I did when I was 35."

Dr. **Thomas L. Gorman,** *Richmond* ophthalmologist and MSV member, is campaigning for the US Senate as an independent write-in candidate. He tried to collect the 9,500 signatures to a petition necessary to put him on the ballot in November but didn't quite make it, so he's persisting with the write-in campaign.

An original copy of the constitution and bylaws of the Southwestern Virginia Medical Society was presented to that Society recently by Dr. **James P. King,** *Radford*, who is a Past President both of that Society and The Medical Society of Virginia. The copy is dated July 22, 1852; it is beautifully handwritten, perhaps with a quill pen; and it lists the names of 19 doctors as the total membership at that time. Today there are 450 members.

Faculty guest of honor at the recent Fitz-High Symposium on head and neck trauma at the University of Virginia School of Medicine was Dr. **Francis H. McGovern,** *Danville*. Dr. McGovern is clinical professor in UVa's department of otolaryngology and maxillofacial surgery.

The Potomac Hospital board of trustees has three new members, all practicing physicians in the *Woodbridge* area: Drs. **Mauricio D. Bas, Jr., Nicholas G. Colletti**, and **John S. Greenhalgh**.

Dr. **Robley Curtis Allison,** *Emporia*, retired recently and the *Southside Sun* published a biographical story and picture attesting to his



Doctor Bliss on his way to work. *Photograph by Bruce Colwell.*

long service in the medical profession. Born in Draper, Virginia, Dr. Allison was graduated from the Medical College of Virginia, and went to Emporia to practice in 1948.

Members of the National Flying Physicians Association completed 1977 without a fatal accident. That is the report of Dr. **Paul A. Woods,** *Waynesboro*, safety chairman of the Association, who said the 2,500 physician-pilots flew more than 375,000 hours (or about 56 million miles) without mishap. According to Dr. Wood, nine fatal accidents would have been "average" for that amount of flying.

Dr. **Thomas W. Murrell, Jr.,** *Richmond* dermatologist and a Past President of The Medical Society of Virginia, has been elected chairman of the board of directors of Blue Shield of Virginia. He was elected at Blue Shield's annual meeting earlier this year. These physicians were elected new board members at the same time: Dr. **Thomas H. Bain,** *Crozet,* and Dr. **Frank G. Turner,** *Danville.* Dr. **Thomas N. P. Johns,** *Richmond,* was elected a new member of the board of directors of Blue Cross.

A recent issue of the *Virginia Health Bulletin*, publication of the State Department of Health, describes the boards, committees, and councils designed to implement the Department's programs and publishes pictures of those who lead these groups. Many of these leaders are physicians; four doctors, for instance, are members of the State Board of Health: Dr. **William R. Hill,** *Richmond*; Dr. **Clarence W. Taylor, Jr.**, *Shawsville*; Dr. **Fletcher J. Wright, Jr.**, *Petersburg*; and Dr. **James B. Kenley**, Virginia's Commissioner of Health and the board's secretary.

These chairmanships are held by physicians: Dr. **F. B. Westerveldt, Jr.,** *Charlottesville*, Virginia Renal Advisory Committee; Dr. **Fitzhugh Mayo,** *Richmond*, Health Statistics Advisory Council; Dr. **Leslie E. Rudolf,** *Charlottesville*, Advisory Committee on Emergency Medical Services; Dr. **Lloyd B. Burk, Jr.**, *Arlington*, Statewide Health Coordinating Council; Dr. **Albert J. Wasserman,** *Richmond*, Virginia Voluntary Formulary Advisory Board; and Dr. **Frederick J. Spencer,** *Richmond*, Home Health Service Advisory Committee. Dr. Kenley heads the Toxic Substances Advisory Council.

Dr. **Lewis A. Micou,** *Buena Vista* general practitioner, retired early this year after 33 years of medical practice. Two doctors new to Buena Vista are slated to replace him—and it will take two to cover Dr. Micou's wide-ranging contributions to medicine and the community. As documented in a story in the Buena Vista *News,* Dr. Micou has been a faithful member of three local medical societies—the Roanoke Academy of Medicine, and the Botetourt and Rockbridge County Medical Societies; president of the Stonewall Jackson Hospital staff (twice); medical advisor to the Buena Vista rescue squad; president of the Lions Club; medical examiner for the city and for the draft board; surgeon for the Norfolk and Western Railroad—and then there's all those patients, 33 years of them, including attending the delivery of the first triplets born in Rockbridge County.

In salute to his 60th birthday and his 30 years as a general emergency room physician at *Waynesboro* Community Hospital, Dr. **William C. Smith** was given a party by emergency room personnel and, as tangible remembrance of the occasion, an engraved pewter mug. The Hospital's policy calls for retirement at 60 years, but Dr. Smith will continue to be on call for pediatrics and to conduct his private practice. Dr. Smith was the first Board-certified

WHO'S WHO IN VIRGINIA MEDICINE

physician in Waynesboro, according to the Waynesboro *News-Virginian,* which printed a picture of a smiling Dr. Smith with the story of the party honoring him.

"Boss of the Year 1978" is the title conferred on Dr. **Herman N. Nachman,** *Richmond,* by the Virginia Capital Charter chapter of the American Business Women's Association.

Dr. **Oswald W. Hoffler,** *Norfolk,* was given the Distinguished Surgeon Award of the Howard University College of Medicine's department of surgery early this year. The award cited Dr. Hoffler's 20 years of leadership in the training of surgical residents and his work as chief of the University's surgical service at Norfolk Community Hospital.

The new Sherman Medical-Surgical Building in *Front Royal* honors Dr. **Elizabeth B. Sherman** for her many years of service to residents of Warren County. The dedication was the idea of Drs. **John Landis, F. A. Irani,** and **Charles Huber,** whose offices are housed by the building. Dr. Sherman, family practitioner and pediatrician, has practiced medicine for 50 years and is much beloved for her contributions to the community as well as to her patients.

Dr. **E. D. Baugh, Jr.,** *Kenbridge,* is the new president of the Virginia Academy of Family Physicians; he was installed during the annual scientific conference of the Academy.

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From the President: Eyes on Vanguard

AT the February meeting of The Medical Society of Virginia's Council, a major new program under the direction of an ad hoc Vanguard Committee was unanimously approved. In making his recommendations to the Society's leadership, Vanguard Chairman Dr. Dick Fields called the Committee's major area of concern, health planning, "the most important issue ever to confront the medical profession". Most of those at the meeting agreed with him and, nine months later, after watching the issue develop here in Virginia and throughout the country, his remarks hold true.

The fact that Virginia physicians are organizing themselves and developing a program to influence the planning process has been noted by the major wire services, national journals and magazines, and Congress, as well as causing concern among health planners and some of the folks at HEW. We have the attention of those who will either shape the present health delivery system into one that will meet the needs of our patients and our profession or one that will fall far short. And I believe it is now absolutely essential that we follow through with the kind of positive recommendations needed to insure that what evolves is reasonable, cost-effective, appropriate and a system that will sustain the momentum we've achieved in scientific (and humanistic) advancements.

In health planning, just as in other negotiations, the medical community must have able, articulate,

and knowledgeable spokespersons who understand the health needs of Virginians and the complex problems faced by physicians whether they be in practice, research, teaching or administration. Now we rely on a small number of volunteers who do an outstanding job despite enormous demands made on them. Ideally, perhaps, we could take a lesson from labor and industry. They approach health planning by having paid executive personnel with staff support represent them. But I'm just old-fashioned, idealistic and stubborn enough to believe that we have sufficient manpower, common sense and dedication within the Society to meet these demands on a largely volunteer basis and a small staff. The need for more members to step forward and get involved is great.

We have been greatly encouraged with the number of local Vanguards being established in the state. The medical Auxiliary is developing its own program to make certain that each of the scores of meetings held weekly in health planning are covered and that the volunteer physicians involved receive additional support.

And, at the Annual Meeting next month in Williamsburg, the Vanguard Committee will recommend that the House of Delegates change its status from an ad hoc to a permanent committee and that it receive the financial support of all Society members. I support these recommendations.

Health planning does or will soon affect every physician. I truly believe continued support of Vanguard is in the best interest of every Society member and his or her patients.

William J. Hagood, Jr., MD, President,
The Medical Society of Virginia.

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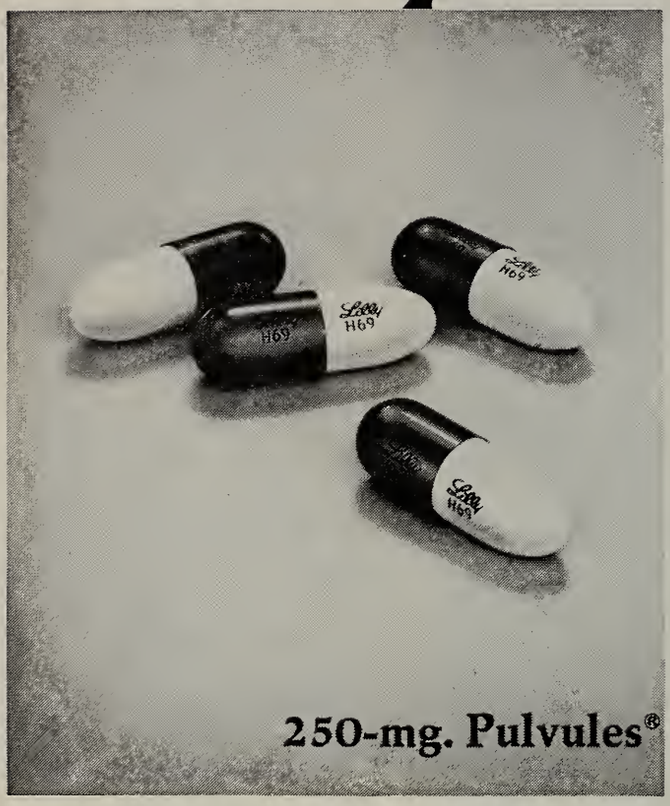
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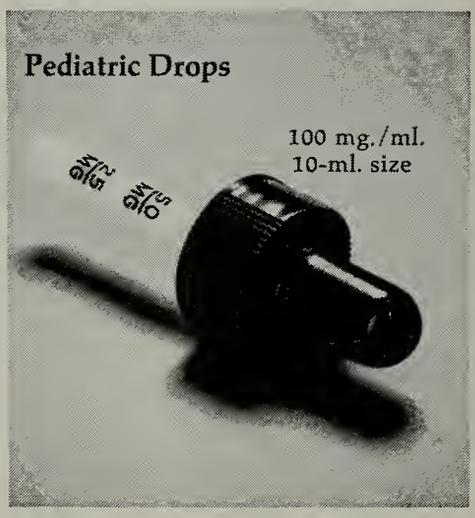
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How to Comply With the New CME Requirement

What is the requirement?

All active members of The Medical Society of Virginia shall complete a minimum of 90 hours of approved continuing medical education every 3 years.

When do the requirements go into effect?

January 1, 1979.

Then my first reporting period will cover January 1, 1979, to January 1, 1982?

Not necessarily. Reporting will be started on a "staggered" basis, with the active membership list divided into three groups according to the first letters of surnames.

Group 1 will be those members whose surnames begin A through G. If you are in Group 1, you will be required to complete 30 hours of approved CME within one year, or by January 1980. Thereafter, you will be on the 90-hours-every-3-years schedule.

Group 2 will be those members whose surnames begin H through N. If you are in Group 2, you will be required to complete 60 hours of approved CME within 2 years, or by January 1981. Thereafter, you will be on the 90-hours-every-3-years schedule.

Group 3 will be those members whose surnames begin O through Z. If you are in Group 3, you must complete 90 hours of approved CME within 3 years, or by January 1982, and report 90 hours at 3-year intervals thereafter.

So if I'm in Group 1, my first report is due January 1, 1980?

You may send your report then if you wish, or even earlier, but the rules give you two months of grace:

If you are in Group 1, your report for the initial 1-year period must be filed no later than March 1, 1980.

If you are in Group 2, your report for the initial 2-year period must be filed no later than March 1, 1981.

If you are in Group 3, your report for the initial 3-year period must be filed no later than March 1, 1982.

Will I be notified of the due dates for my reports?

No. That is your responsibility.

How do I report?

A form on which to report your credits will be enclosed with the CME record keeping booklet to be sent to you early in 1979. Or write to the MSV Commission on Continuing Medical Education, 4205 Dover Road, Richmond VA 23221.

What may I report?

The same rules for credits apply as those for the Virginia Physicians Recognition Award. One-third or 10 hours per year of your CME hours must qualify for Category 1; these are CME activities with accredited sponsorship. The balance of your reported hours, or 20 hours per year, may be distributed among Categories 2 through 6 in any way you wish.

Any approved specialty society requirements will be accepted for credit.

What if I have more than 90 hours of credit in any one reporting period. May I carry them forward to the next reporting period?

No. Hours in excess of the minimum requirement may not be carried forward for credit in a succeeding period.

Are there any exemptions?

Yes. 1. A new member is exempt from the CME requirements for the calendar year in which he becomes a member. 2. A member shall not be required to comply during a period of active military service, and appropriate prorations may be made.

What happens if I do not comply with these requirements?

You may lose your MSV membership.

1. If you fail to file your report by the due date, you are notified of the delinquency and given 30 days in which to file. If that notice, sent by the Committee on Membership, elicits no response, the House of Delegates may receive a recommendation that you be suspended from membership.

2. If, in the judgment of the Commission, your report does not satisfy the minimum requirements, the Committee on Membership is notified and a hearing held. Should the Committee rule that your credits are indeed insufficient, you will be given a 30-day period in which to satisfy the requirements. Should you fail in that request, the Committee may recommend to the House of Delegates that you be suspended from membership. **A.G.**

On Guard!

CME credits accumulated in 1978 will NOT be valid for the MSV membership requirement here described. Only those hours earned January 1, 1979, and thereafter will be honored.

MEETINGS ABOUT MEDICINE

OCTOBER

18

Pediatric Conference (University of Virginia, Medical College of Virginia), **Winchester.** Mrs. Mary Lou Currier, 804/924-5318.

19

Medico-Legal Seminar (Dept Legal Medicine, MCV, and Office Chief Medical Examiner), **Lebanon, Virginia.** Mrs. Erma Blanchard, 804/786-0496.

20-22

Neurology for the Practicing Physician (University of Virginia), **Charlottesville.** Mrs. Currier, 804/924-5318.

21

Alcoholism Seminar: Effect of Addiction on the Offspring (MCV/VCU), **Richmond.** Marcia J. Lawton, PhD, 804 257-1136.

23-26

Interstate Scientific Assembly for the Primary Care Physician (DC Academy Family Practice, University of Maryland, Howard and Georgetown Universities), **Washington DC.** Dr. Alton Ochsner, PO Box 1109, Madison WI 53701.

25

Symposium on Lymphoproliferative Diseases and the John Hoover Moon Memorial Lecture (Division Hematology, MCV) **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

27

Current Concepts in Care of the Elderly (George Washington University), **Washington DC.** Terry West, 202/676-3721.

27-28

50th Annual **McGuire Lecture: Cardiology in Primary Care** (Depts Cardiology/CME, MCV), **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

29-Nov. 2

44th Annual **Scientific Assembly of the American College of Chest Physicians. Washington DC** Hilton Hotel. Dale E. Braddy, 911 Busse Hiway, Park Ridge IL 60068.

NOVEMBER

1

McGuire Clinic Lecture Series: Practical Clinical Problems, Advanced and Review, 7702 Parham Road, **Richmond.** Dr. Richard Glazier (804) 270-0240.

NOVEMBER

2-3

Measurement, Monitoring and Critical Patient Care for Generalists in Anesthesia (Johns Hopkins), **Baltimore.** Office of CME, 301/955-5880.

2-3

Clinical Evaluation and Management of Chronic Pain (University of Tennessee), **Memphis.** Mrs. Grace Wagner, 901/528-5547.

5-8

Symposium on Computer Applications in Medical Care (Medical College of Virginia, George Washington and Georgetown Universities), **Washington DC.** Mrs. Erma Blanchard, 804/786-0496.

6-7

Practical Aspects of Cancer Management (Medical College of Virginia and American Cancer Society), **Williamsburg.** Mrs. Ethel Sketchley, 804/359-0208.

8-11

Adolescent Medical and Social Problems (Dept Pediatrics, Div Adolescent Medicine, MCV), **Hospitality House, Williamsburg.** John Hinckley, 805/353-9529.

11-12

Reading Retreat on Rheumatology, Nephrology and Pulmonary Disorders (American College of Physicians, Medical College of Virginia, University of Virginia), **Peaks of Otter Lodge, Blue Ridge Parkway, Virginia.** (Dr. Daniel N. Mohler, 804-924-5118.

15-17

Recent Advances in Clinical Medicine (University of Virginia), **Charlottesville.** Mrs. Mary Lou Currier, 804/924-5318.

16

Pediatric Conference (University of Virginia and Medical College of Virginia), **Roanoke, Virginia.** Mrs. Mary Lou Currier, 804/924-5318.

16

Medico-Legal Seminar (Dept Legal Medicine, MCV, and Office Chief Medical Examiner), **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

17-18

Progress in Pediatrics 1978 (Children's Medical/Surgical Center, Johns Hopkins), **Baltimore.** Office of CME, 301/955-5880.

NOVEMBER

18

Care of the Critically Ill Patient: the Management of Serious Infections (Fairfax Hospital), **George Mason University Lecture Hall, Fairfax, Virginia.** Mrs. Shirley Kerzaya, 703/698-3219.

30-Dec. 1

Advances in Obstetrics and Gynecology (Dept Ob-Gyn, MCV) **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

DECEMBER

1-3

Neurologic Problems of Infancy and Childhood (MCV/VCU, UVaSM, and EVMS Divisions of Child Neurology) Cascades Meeting Center, **Williamsburg.** James E. Etheridge, Jr., MD, 804 446-5600.

2

Sixth Annual **Geriatrics Symposium** (Baltimore City Hospitals, American Geriatrics Society, Johns Hopkins), Baltimore City Hospitals, **Baltimore.** Program Coordinator 301 955-5880.

JANUARY

15-18

Alton D. Brashear **Postgraduate Course in Head and Neck Anatomy** (Dept of Anatomy, MCV), **Richmond.** Dr. Hugo R. Seibel, MCV Station, Richmond VA 23298. 40 elective hours AAGP.

JANUARY

22-26

Southern Clinical Neurological Society, Annual Meeting, Pier 66 Hotel, **Fort Lauderdale,** Dr. B. J. Wilder, University of Florida Hospital, Gainesville FL.

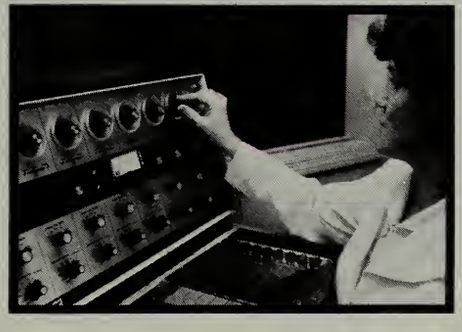
25-26

2nd Annual **John M. Nokes Lecture: New Developments in Diagnosis and Treatment of Gynecological Malignancies** (UVa School of Medicine), **Charlottesville.** Mrs. Mary Lou Currier, 804 924-5318.

AT THE GREENBRIER

"Children's Learning Disabilities," an interdisciplinary course for health care professionals, will be held on November 11-12, 1978, at the Greenbrier, White Sulphur Springs, West Virginia. Course faculty include Ronald M. David, MD (Pediatric Neurology) and Martin Lenhart, PhD (Communication Disorders) of the Medical College of Virginia; Gerald Wallace, EdD (Special Education) and Robert H. Willoughby, PhD (Pediatric Psychology), of the University of Virginia. Course tuition is $75.00. Interested parties should contact Mr. David Prestipino, The Achievement Center, 615 North Jefferson Street, Roanoke, Virginia 24016, telephone 703/982-0218.



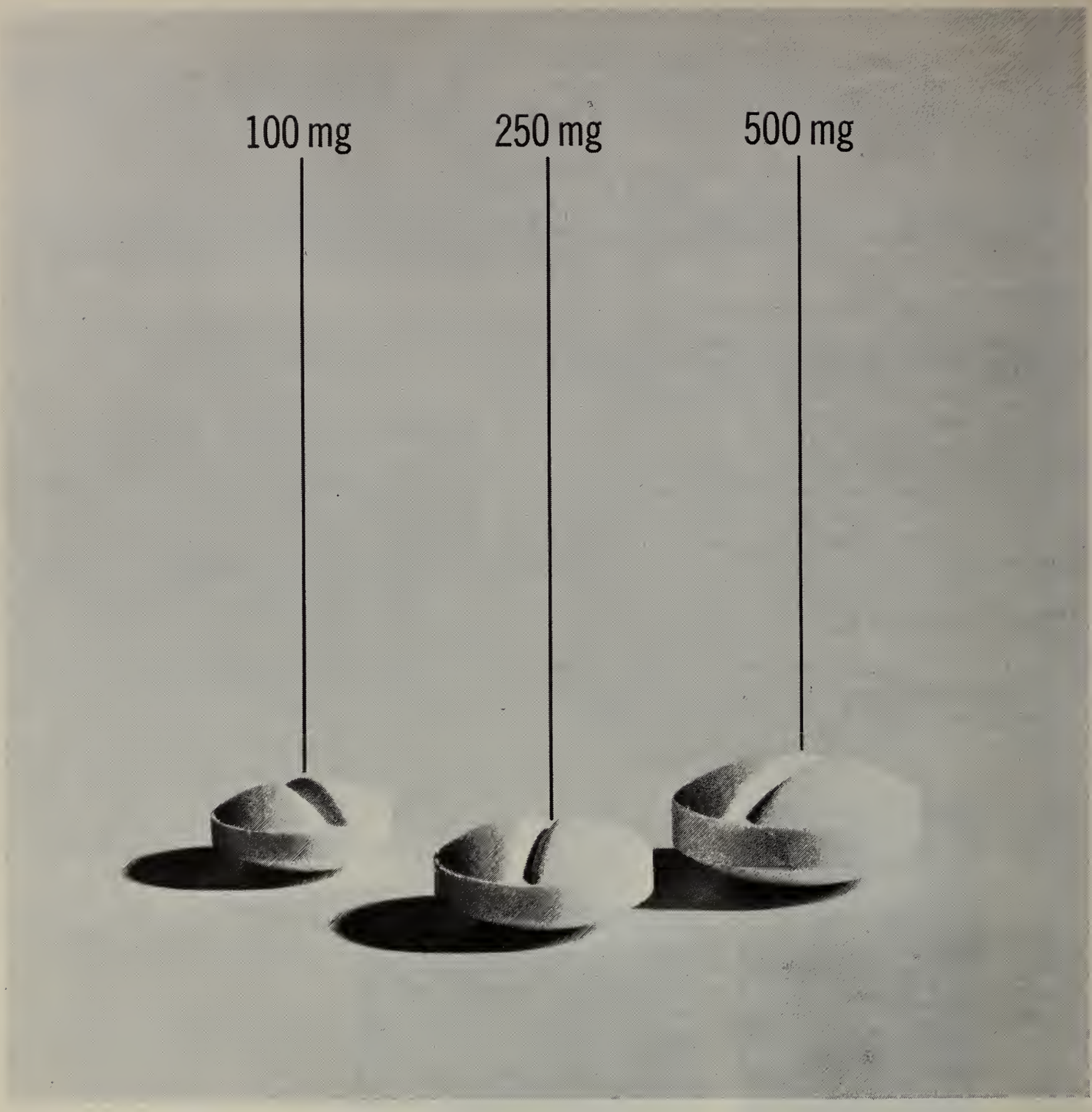




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LETTERS TO THE EDITOR

VA's "Phenomenal Success" Cited by Surgery Chief

Dr. William Gill's inaugural address published in the July 1978 issue[1] is correct on the waste and futility of bureaucratic medicine. In citing the Veterans Administration as an example, however, he has maligned my job.

Dr. Gill says the VA has too many acute care beds, keeps patients three times longer than private hospitals, costs $4 billion a year and is an "embarrassing failure." He extrapolates a national health service would fail at a cost of $280 billion a year. Overlooking crucial facts, his extrapolation is invalid.

Unlike occupants of private hospitals, VA patients have very limited resources, are mostly elderly, often have several different severe physical problems and frequently come from far away, or have no homes to return to. When they need acute care they require more time for care and disposition.

Despite these facts, patients on our cancer, vascular and cardiac surgery wards stay an average of only two weeks. Uncomplicated cholecystectomies are discharged in a week and hernias in three days. Respectable results in this population reflect very intensive care. Were VA not providing it, the burden would fall on private hospitals. There it would probably cost taxpayers more than now.

The reason private care of our disabled and indigent would cost more is that the VA works on a fixed budget never sufficient for all demands. Every three months our priorities must be reviewed and almost every day requests must be denied. No one profits by ordering or doing more. On the contrary, for us any unnecessary dose or test is a material and measurable sacrifice.

Much has been made of government employees' propensity for spending every dollar available. Too little, however, is said of those who strive constantly to save. They constitute the majority of my fellow employees. This year by carefully restricting surgical supplies, we are underspending our operating room budget by $100,000. In 1978 what private hospital can make such a claim?

There is certainly some waste in the VA, as there is in every sort of hospital. Our numbers of acute care beds are being reduced, as must be the numbers in private hospitals. The VA, however, is as necessary today as when Congress rewarded veterans of the Revolution with free health care. With little luxury and no profit we give required excellence.

Rather than an "embarrassing failure" the VA is a phenomenal success. We are driven to success by desire to teach and learn, by esprit de corps and by very effective complaints of well organized veterans. Since these motives would not pertain to a national health service, we are no example at all of what a national health service would be like. In fact, the very reasons for the VA's excellence are also reasons for believing that all medicine under a single federal bureaucracy would be a disaster.

Hunter H. McGuire, Jr., MD
Chief, Surgical Service
Veterans Administration Hospital
Richmond VA 23249

1. Gill WCjr: Where do we go from here? Va Med 105: 543-545, 1978

Multiple Prescriptions Present Problems

The growing use of a variety of forms on which multiple prescriptions may be written has become a source of concern to the Interprofessional Relations Medicine/Pharmacy Committee, of which the undersigned are members.

Though the Committee's members are aware of the convenience in time and record-keeping these "polyscrips" offer the prescriber, they believe these forms offer the following serious problems.

1. Multiple prescriptions on one blank widen the margin for dispensing error and constitute a health hazard.

2. The Code of Virginia makes it illegal to write prescriptions for more than one scheduled drug on the same form. A Schedule 3 drug and a Schedule 4 drug cannot appear on the same blank.

3. Lack of uniformity in size and shape leads to considerable filing difficulty for the pharmacist. (It should be noted that medication profiles, which the Committee's members strongly endorse, make it eas-

ier for the pharmacist to cope with this problem.)

4. Any procedure requiring more time of the pharmacist elevates dispensing costs and thereby the cost of the drug to the patient.

5. Little room is left on the front or back of the multiple prescription for the pharmacist to record such required notations as date, refill information, pricing, drug manufacturer or brand name dispensed, or precautions for drug sensitivities or intolerances.

6. The patient may be inconvenienced if he elects to fill one of the prescriptions at one time and another at a different time.

How can these problems be met? Some say multiple prescriptions should be abolished. Others say they only need standardizing.

Certainly doctors and pharmacists must work together to find a solution.

Lloyd T. Griffith, MD
Herman M. Nachman, MD
Marvin L. Weger, MD
R. David Anderson, RPh
Carl Emswiller, Jr., RPh
Sam Crickenberger, RPh

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BOOKS

Living with High Blood Pressure: the Hypertension Diet Cookbook. JOYCE DALY MARGIE, MS, and JAMES C. HUNT, MD. Bloomfield, New Jersey, HLS Press, Inc., 1978.

Two experts from the Mayo Clinic have prepared a highly readable and practical cookbook for the dietary management of persons with high blood pressure. Because hypertension manifests itself in familial clusters, the approach focuses on food preparation for all family members. The potential for carry-over of a dietary life style to other family members may have prophylactic benefits. Even if drugs are necessary for control of hypertension, daily regulation of sodium and energy intake are essential adjuncts to total patient management.

The book presents a brief section defining the physiologic mechanism for development of hypertension, a rationale for its medical management, both drug and dietary, and descriptive menu plans for regulation of sodium intake to 40 and 90 millequivalents per day at energy intakes of 1000, 1500 and 2000 kcals per day.

The book is also concerned with recipes designed to achieve these nutritional objectives. As a reader of numerous cookbooks and gourmet magazines and as a weekend chef, I found the recipes exciting and interesting, ranging from the preparation of honey-glazed acorn squash to zabaglione. Ethnic dishes are well represented. The recipes are readily understood, substitute items are suggested, and a where-to-buy guide for special dietary products is given. Appendices provide meal plans developed from foods and recipes in the book, a useful guide to the sodium and energy content of foods to be avoided, and tips on eating away from home. Above all, the book is well indexed.

While the book is primarily designed for lay use, it should be read by all professionals concerned with managing hypertensive patients. Physicians should advise families with hypertensive members to purchase the book and follow the nutritional advice that is presented in such palatable form. It is available only from the publisher at 1455 Broad Street, Bloomfield NJ 07003, at $12.95.

L. J. FILER, MD

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Final classification of the less-than-effective indications requires further investigation.

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***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

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Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

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Once we've published your article, it belongs, technically, to Va Med. We're happy to have it reprinted elsewhere in a way that will enhance your reputation; we will ask your acquiescence before granting permission, and we expect you to confer with us on second-publication requests you receive.

Your manuscript involves you, the Editors, and the printer. So that all three of these elements function at the top of their form, these mechanics are important:

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2. It is pertinent to send a covering letter giving address and telephone number of the person who will communicate about the manuscript.

3. It is imperative to type every page of the submitted material in double-space. With wide margins. Double-space your text. Double-space your references. Double-space your legends. Double-space your tables. *Double-space.*

4. It is equally imperative that your figures are glossy prints. Anything else won't reproduce adequately.

5. Like all quality journals, Va Med has a specific typographic style for references; this style is uniform for all references throughout each issue. It would be a great boon if you would ask your typist to study that style and follow it in typing your references. Ah, the miles of references your journal staff has re-typed! A task tedious in the extreme—and it places your references at peril of error.

References must be numbered consecutively as they appear in the text and listed in that numerical order. That's part of the style. Alphabetizing is out.

6. It is helpful to provide, on a separate sheet, an abstract or summary of your work.

7. It is a significant tradition in medical journalism to describe pharmaceutical products generically. If you wish to add brand names parenthetically, well and good. But the generic first, please.

Also in the medical tradition, all units of measure appear in the metric system.

8. You are responsible for the accuracy of your statements and references. If any of your material is disputed, you're up front to defend it. On guard!

9. Having asked all this of you, we drop the clincher: The Editors reserve the right to make changes in your text that will clarify its meaning, correct spelling and punctuation, enhance your literary prowess, suit the journal's exigencies of space and style. That's the way it is in publishing. We promise you unfailing respect and discretion—and a rough draft for your appraisal if any major revision is contemplated. We don't want to wound you. We do want the presentation of your work to be absolutely first-class.

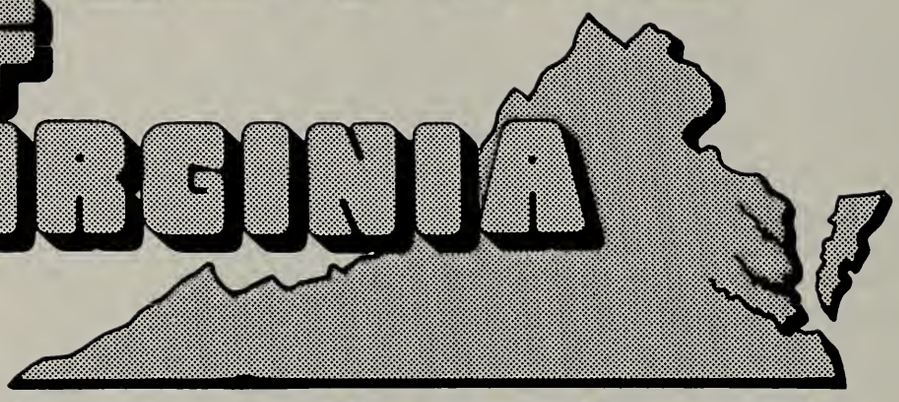
10. Send your manuscript to the Editor, VIRGINIA MEDICIAL, 4205 Dover Road, Richmond VA 23221. The mat outside the office door reads, "Welcome to your manuscripts!"

Of the many books on writing, there are two the Editors find of particular merit. One is *The Elements of Style,* by William Strunk, Jr., and E. B. White (MacMillan, softcover $1.65). This extraordinary little book, first published in the 50's, is a national primer. The other, a recent entry, is *On Writing Well,* by William Zinsser (Harper & Row, softcover $5.50). This is a lengthier volume, but it is still a quick study, and a valuable one. Both of these books are a joy to read; the authors practice what they preach, and their writing is clear and vigorous. The principles they offer are easy to grasp; all are illustrated vividly (and often amusingly) with before-and-after or right-and-wrong examples. Treat yourself to one or both of these books. You'll be glad you did.

ADVICE TO AUTHORS

Editors' Note: If the recommended Zinsser work, *On Writing Well*, is not carried by your bookstore, send your check for $5.50 to Harper & Row, Atten: Mail Order, 10 E. 53rd St., New York, NY 10022.

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VIRGINIA
MEDICAL
OCTOBER 1978

Kawasaki Disease Is Diagnosed in Virginia

Jacob A. Lohr, MD, and Richard W. Kesler, MD,
Charlottesville, Virginia

First reported in Japan in 1967, Kawasaki disease appeared in Virginia this year. It is an acute febrile malady of childhood, and physicians providing medical care for children should be aware of its unique clinical features.

MUCOCUTANEOUS lymph node syndrome (MCLS or MLNS) is a recently recognized childhood illness now known by most authorities as Kawasaki disease. First described in the American medical literature less than four years ago and first recognized in Hawaii seven years ago, the story on this disease is far from complete. Etiology and specific treatment are not known. However, the clinical presentation of confirmed cases and pathologic findings in fatal cases are distinct enough that the disease is widely accepted as a specific entity.

History.

In 1967 Dr. Tomisaku Kawasaki published a report in the Japanese literature of 50 cases collected since 1960 which he called mucocutaneous lymph node syndrome.[1] The first report in the American literature appeared in 1974, when Dr. Kawasaki reported on the clinical features of his cases as well as data from the Japan Research Committee of MLNS that had been organized in 1970.[2] Dr. Marian Mellish and others reported the initial cases from the United States in 1976.[3] Included were 16 cases, with the first case presenting in 1971.

Definition.

The criteria by which Kawasaki disease is diagnosed are in Table 1 (*next page*). Five of these six criteria must be met to satisfy the case definition of the Japan Research Committee of MLNS.[4]

The National Center for Disease Control (CDC) has qualified the criteria with the stipulation that the illness must not be explicable by other well known etiologies.[5]

Epidemiology.

The Japanese now have detailed information on more than 10,000 cases. The male to female ratio is 1.5 to 1, and the median age is one year, with one-half of the patients being less than 2 years of age. The case fatality rate is less than 2%, with 80% of the fatalities being males. Although small geographic clusters, re-

From the Department of Pediatrics, University of Virginia Medical Center, Charlottesville VA 22901. Address correspondence to Dr. Lohr at Box 386.

Portions of this manuscript are to appear in *Principles and Practice of Infectious Diseases,* edited by Mandell, Douglas, and Bennett, to be published in 1979 by John Wiley & Sons, New York.

Submitted 7-21-78.

Table 1. Criteria for Kawasaki Disease.
(Five of the six criteria must be met.)

1. Fever:
   A. Lasting five or more days
   B. Unresponsive to antibiotics
2. Ocular Conjunctivae: Bilateral Congestion
3. Lips and Oral Cavity:
   A. Lips—dry with red fissuring
   B. Tongue—protuberance of papillae
   C. Oropharyngeal mucosa—diffuse reddening
4. Peripheral Extremities:
   A. Early stage—reddening of palms and soles and indurative edema
   B. Later stage—membranous desquamation, often periungual
5. Exanthem: polymorphous, nonvesicular, with truncal distribution
6. Lymphadenopathy: acute, nonsuppurative enlargement of cervical nodes

CDC Qualification: Illness must not be explicable by other well-known etiologies.

currences, and second cases within families have been recognized, they are unusual.

Even though the disease is not officially reportable in the United States, cases have been recorded from 31 states, Puerto Rico, and the District of Columbia.[5] Since 1975, 232 suspect cases have been collected by the CDC; 117 cases with adequate case information were received and 112 of these cases were confirmed on the basis of the accepted diagnostic criteria. The male to female ratio was 1.5 to 1, with a mean age of 3.8 years. The age range was from 3 months to 13 years; 57% of the cases were whites, 18% were blacks, and 25% orientals. As in Japan, the disease was not limited by geographic, seasonal, socioeconomic or environmental barriers.

Cases have also been seen in Korea, Taiwan, the Philippines, Australia, Canada, Mexico, England, Scotland, Belgium, the Netherlands, Spain, Italy, Greece, West Germany, Sweden, and Turkey.[6]

During the first half of 1978, 14 cases were reported to the Epidemiology Division of the Virginia State Health Department. The patients were between 4 months and 5 years of age and were from nine different counties. There were no fatalities.

Clinical Findings.

Fever is present in 95% of the cases.[2] It is usually the initial symptom and it lasts 1-3 weeks. The temperature may range from 101-104°F and the fever curve is of the remittant type.[3]

There is bilateral congestion or hyperemia of the bulbar conjunctivae in 88% of the patients.[2] The palpebral conjunctivae are less involved.[3] There is minimal conjunctival edema, and no mucoid or purulent discharge. There is no involvement of the cornea or of the internal structures of the globe.

Dryness, redness, and fissuring of the lips are apparent in 90% of the patients; 77% have protuberance of the tongue papillae which is clinically indistinguishable from the "strawberry tongue" of streptococcal disease; 90% have profuse reddening and dryness of the oral and pharyngeal mucosa.[2]

The peripheral extremities are involved in two stages. Initially, 88% of the patients have red palms and soles which appear on the third to fifth day of illness. This manifestation lasts 5–15 days. Indurative edema of the hands and feet during the initial stage occurs in 76%, reminescent of juvenile rheumatoid arthritis or scleroderma. During the convalescent stage there is membranous desquamation of the fingertips in 94% of the children. This occurs during the second or third week of the illness and usually begins in the periungual area. Transverse furrowing of the nails has been noted at 4–8 weeks in most patients.[2]

Ninety-two percent of the patients experience an exanthem that appears 1-5 days after the fever begins. It usually disappears in approximately one week. Its distribution is primarily truncal but may include the extremities and face as well.[2]

Seventy-five percent of the patients have cervical adenopathy.[2] Usually there is enlargement in excess of 1.5 cm of a single node but multiple adenopathy can be present. The nodes are minimally tender, firm, non-suppurative and there is no inflammation of the overlying skin.[3]

Diarrhea and/or abdominal pain have been seen in both the early and late segments of the clinical course. Hydrops of the gall bladder has been noted in association with the abdominal pain.[7]

Arthralgia or arthritis may be a prominent part of the clinical course.[2] The joints most likely to be involved are the knees, wrists, and ankles. The swelling and/or discomfort generally remain until the patient becomes afebrile.[3]

Aseptic meningitis has been documented in a number of cases. Increased CSF pressure, bulging fontanelle, and encephalitic symptoms have been reported,[3] but the outcome of the meningitis is usually benign.

Urethritis and meatal ulcers have been noted,[3] as has otitis media.[8]

The most significant finding in Kawasaki disease is carditis, which accounts for the mortality rate of approximately 2%.[2] The percentage of patients that have carditis is not definitely known, but one author found electrocardiographic and other findings suggestive of carditis in 70% of his patients.[9] Clinical evidence of carditis can appear in the first week of the

illness or may not be apparent until well into the convalescent stage.[10] Death, if it occurs, is mainly in the first 3-4 weeks; however, patients may suddenly die in the convalescent stage even without cardiac disease being previously manifested.[3]

The carditis may be clinically associated with sinus tachycardia, friction rub, gallop rhythm, distant heart sounds, apical systolic murmur, arrhythmia, or signs of cardiac failure or shock. Supportive data from the laboratory includes increased cardiac LDH, increased heart size on X-Ray and EKG evidence of arrhythmia, heart block, myocarditis, or pericarditis.[10]

Angiography has been performed in a small number of patients. Kato[10] reported the results of studies from 20 patients that ranged in age from 4 months to 8 years. Apparently most if not all had evidence of heart disease clinically. Coronary angiography was performed in 14 patients from 3 weeks to 6 months from the onset of the disease and in 10 patients from 6 months to 4 years, when most were asymptomatic. Serial angiograms were performed in four patients. Twelve patients had studies revealing aneurysms or tortuous, irregular or stenotic coronary arteries. Eight patients had a normal study. Eight of 12 patients with abnormal findings were less than one year of age, and 11 were males. Coronary aneurysms and other abnormal findings detected on the angiogram disappeared in two patients. Where coronary angiograms were performed within six months of the onset of the disease there was a high incidence of coronary aneurysms, while most of the patients studied more than six months after the onset of the disease had normal angiograms or minimal changes.

Fujiwara[11] reported on the pathology of the heart in Kawasaki disease. His studies represented findings from 20 hearts. He was able to demonstrate that pathologically the disease is an acute inflammatory angiitis that in the first week is characterized by acute perivasculitis and vasculitis in the arterioles, capillaries, venules, and small arteries. There is, in addition, early perivasculitis and endarteritis of the major coronary arteries. Even at this early stage there is evidence of pericarditis, myocarditis, and inflammation of the AV conduction system as well as endocarditis with valvulitis. In the second to third weeks of illness the changes are characterized by panvasculitis of the coronary arteries and aneurysm formation with some thrombus formation. After 4 weeks there is disappearance of the acute inflammatory changes and development of scarring with severe stenosis of the coronary arteries.

Based on the pathologic findings, the causes of sudden death in Kawasaki disease during the first week of illness are myocarditis and inflammation of the AV conduction system. Ischemic heart disease, ruptured aneurysms, myocarditis and lesions of the AV conduction system account for the sudden deaths in the next several weeks, and ischemic heart disease takes its toll in the later stages of the disease.[11] Those who appear to be at highest risk for sudden death from carditis are boys less than one year of age who have an extremely elevated erythrocyte sedimentation rate and prolonged fever and rash.[3]

There has been considerable discussion in the literature concerning the similarity between Kawasaki disease and the pathologic entity, infantile polyarteritis nodosa (IPN). IPN differs from the classic or adult form of polyarteritis nodosa in that the primary site of involvement is the coronary arteries in IPN and the small arteries of the heart, skeletal muscle, and submucosa of the gastrointestinal tract in the classic disease.[3] Pathologically, IPN and Kawasaki disease are indistinguishable.[12,13] Only a few cases of IPN have been described clinically prior to death, so comparison of the clinical courses of Kawasaki disease and IPN is difficult. However, a review of case histories from autopsy cases reveals that the preceeding illness in some patients who died with IPN has been quite similar to that associated with Kawasaki disease.[14,15,16,17]

Laboratory Findings.

Many patients are mildly anemic.[2,18] Leukocytosis with white counts in excess of 18,000 per cu mm is to be expected and is associated with a minimal to marked shift to the left.[2,3,18] Thrombocytosis appears in the second and third weeks of illness with the platelet count being between 500,000 and 2,000,000 per cu mm.[3,6] This thrombocytosis may play a major role in the thrombotic phenomena that occur in the coronary arteries. An increased erythrocyte sedimentation rate is to be expected.[2,3,18]

Pyuria is common and up to 100 WBCs per hpf may be found.[2,3,18] It generally lasts 2 to 5 days. Urines obtained from suprapubic aspirations do not contain white cells; therefore, the source of the white cells is apparently the urethra.[3] Mild to moderate proteinuria has been recorded but microscopic hematuria is rare.[2,3,18]

CSF pleocytosis, when it occurs, is usually mild, with white counts of less than 100 cells per cu mm. The lymphocyte is the predominate CSF cell type.[3]

Mild increases in serum transaminases are seen.[2,3,18] Significant elevations of bilirubin are uncommon, but clinical jaundice has been recorded.[2,18]

Other laboratory findings frequently noted are positive C-reactive protein, and increased alpha-2 globulins.[2,18] Serum complement levels are elevated early in the disease[2] but may be depressed later.[3] *Over*

Table 2. Kawasaki Disease, Differential Diagnosis.

1. Scarlet fever
2. Rocky Mountain spotted fever
3. Leptospirosis
4. Viral syndrome
5. Measles
6. Rubella
7. Infectious mononucleosis
8. Scalded skin syndrome
9. Cervical adenopathy or adenitis
10. Stevens-Johnson syndrome
11. Serum sickness
12. Juvenile rheumatoid arthritis
13. Scleroderma
14. Periarteritis nodosa
15. Lupus erythematosis
16. Acrodynia

Etiology.

The etiology of Kawasaki disease is unknown. Streptococcal disease was initially suspected because of the rash, the strawberry tongue, the pharyngeal hyperemia, the cervical adenopathy and the desquamation. No evidence has been found to support this or other bacterial etiology.[19]

Several investigators have found rickettsial-like bodies in electron micrographs of skin, lymph nodes, spleen, or adrenal glands.[20,21] One investigator was even able to grow these bodies in tissue culture,[22] but subsequent investigators failed to confirm these results.[23] Elevations of proteus OX-19 and OX-K titers have also been reported,[18] but most sources report unsuccessful attempts to document rickettsial disease.[3,18]

Wong and others noted in a recent review of leptospirosis that the findings of that disease could fulfill the criteria for a diagnosis of Kawasaki disease.[24] Mellish, however, found negative leptospiral titers in her patients.[3]

Table 3. Kawasaki Disease, Laboratory Studies and Procedures to Be Considered.

1. Hematocrit
2. White count with differential
3. Serial platelet counts
4. Erythrocyte sedimentation rate
5. Urinalysis
6. Lumbar puncture
7. Liver function studies (transaminases, bilirubin)
8. C-reactive protein
9. Serum complement
10. Serial EKGs
11. Chest X-ray
12. LE Prep and antinuclear antibody
13. Rheumatoid factor
14. Infectious mononucleosis test
15. Leptospiral antibody studies
16. Weil-Felix
17. Specific antibody titers, including Rocky Mountain spotted fever complement fixation
18. Bacterial cultures
19. Viral cultures

Parainfluenza 2 virus has grown from a throat swab from one patient with Kawasaki disease. This same patient had a parainfluenza 2 complement fixation titer rise from 1:8 to 1:64.[25] No evidence exists to support any other viral etiology.[19]

Elevated IgE levels were described in a group of Japanese patients. Their highest titers occurred 1-2 months into the disease. They had no evidence of allergic disease.[26] Although the significance of this finding is not known, it is of interest that patients with infantile polyarteritis nodosa also have been found to have elevated IgE levels.[27]

Certainly the disease could be the result of yet unidentifiable infectious agents; but because of the paucity of epidemics and intrafamilial spread, it is unlikely that the etiologic agent is communicable in the usual sense. However, the sudden appearance of the disease in Virginia should make one at least suspicious of a single inciting agent, be it infectious, allergenic, immunogenic, or toxic.

Differential Diagnosis and Evaluation.

The differential diagnosis is somewhat extensive. A suggested list is noted in Table 2. Generally the noted diseases can be effectively ruled out by historical data, careful physical examinations, simple laboratory tests, and observation of the course.

Our approach to the evaluation to these children is outlined in Table 3. We do not recommend the utilization of all of these tests for patients with suspected Kawasaki disease but feel that the tests should be considered and appropriately applied to the specific case in question.

Treatment.

Antibiotic therapy has in no way been effective in modifying the course of the disease.[2] Steroids have provided relief for the fever in some patients but in others have had no effect.[2,3]

Anticoagulants, including aspirin, have been suggested[3] but there is no data to support their usefulness.

Aspirin therapy has had variable effects in the overall treatment of the disorder. Some report no effect in treating the associated arthritis or arthralgia

in spite of appropriate serum levels.[3] Recently, data has been presented to demonstrate the effect of aspirin in decreasing the duration of the febrile course and the length of hospitalization in a small group of patients. It was shown that early in the course, these patients do not absorb aspirin effectively, and a dose of 150 mg per kilo per day must be utilized initially.[28] The results of this study sound promising but the data must be substantiated by additional studies.

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Facial Fractures at an Urban Hospital: A Review Continued

Mary Ann Frable, MD, Kwang Hong, MD, Jang-Huei Jang, MD, and Youn Wook Park, MD, *Richmond, Virginia*

A TOTAL of 682 facial fracture patients were treated surgically at the Medical College of Virginia Hospitals between January 1, 1971, and December 31, 1977. This study continues a review started in 1975 encompassing the years of 1971 through 1974 and now includes data from the years of 1975 through 1977. This number excludes simple nasal fractures, many mandibular fractures treated by closed reduction on an outpatient basis, and fractures not treated surgically. Also excluded in this study are fractures treated by Medical College of Virginia faculty at outlying hospitals.

All patients included in this study were treated on an inpatient basis. The managing services were otolaryngology, plastic surgery, oral surgery, ophthalmology, neurosurgery or any combination of these services. Multiple fractures reduced by different services at different times contributed to difficulties in compiling departmental and surgical statistics.

One of the authors previously reviewed in this journal[1] the maxillo-facial fractures treated at the Medical College of Virginia Hospitals during 1971, 1972 and 1973. Of particular interest in this review was the sharp drop in facial fractures treated in 1974 associated with the Arab oil embargo and the subsequent enactment of the 55 mph highway speed limit.[2] In 1974, gasoline consumption actually dropped to 2500 million gallons of gasoline consumed for highway use from 2700 million gallons during 1973. During this same time interval motor vehicular mileage and the number of motor vehicles registered also decreased. Likewise, traffic crashes, traffic injuries and traffic fatalities also decreased.

Facial fractures are most common in the third decade of life, suggesting this is a period of peak activity and mobility in an individual's life. Fractures are common in the second and fourth decades of life with fewer patients at either extreme of the age spectrum. The youngest patient in this series was 4 years of age and the oldest, 91.

Between 1971 and 1976, mandibular fractures were the most common fracture treated at the Medical College of Virginia Hospitals, followed by zygomas or so-called tripod fractures. The mandible and zygoma are both predisposed to frequent injury because of their prominent position. Most nasal fractures have been treated as outpatients and therefore do not appear in these statistics.

Facial fractures occur about three times as often in males as females. Fractures are most common during

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Table 1. Distribution of Services

SERVICE	1971	1972	1973	1974	1975	1976	1977
Plastic	23	28	31	21	30	30	25
ENT	34	32	24	20	28	25	24
Oral Surg	39	26	34	20	34	44	46
Eye	4	4	3	2	—	—	1
Plastic/Oral Surg	—	2	5	3	4	—	4
ENT/Oral Surg	3	3	3	—	3	2	2
Neurosurg/ENT	1	—	—	—	3	2	2
Neurosurg/Oral	—	—	—	—	2	4	—
Neurosurg/Plastic	—	—	—	—	—	2	—
TOTALS	104	95	100	66	104	109	104

the months of August and September, a time when Virginia is very hot and humid. Richmond's climate can be classified as modified continental and has a record mean of 14.0 inches of snowfall per year. A drop to 6 inches of snowfall during the winter of 1974-75 could be used to explain the drop in accidents during that interval, but a further drop to 1.2 inches occurred during the winter of 1975-76, when vehicle accidents were sharply higher.[3] The Department of Virginia State Police indicates that weather conditions, as well as road conditions, bear little relationship to the incidence of facial fractures. Crash volumes do follow traffic volumes and occur most frequently on Friday and Saturday between 5 PM and midnight.[4]

Of particular interest is the relationship between maxillo-facial injuries and seat belt usage. Beginning in 1963, when seat belt installation became mandatory in automobiles, a greater number of maxillo-facial injuries were recorded because persons using seat belts more often sustain non-fatal injuries and live to obtain medical aid. The later use of shoulder harnesses, the use of mandatory continuous buzzers in 1973 cars, and the later use of mandatory interrupted buzzers when seat belts are not fastened have all affected facial fracture statistics. Most disturbing is the recent decreased use of the seat belt. In Virginia in 1975 only, 26.8% of male and 28.7% of female drivers used seat belts, but in 1976 only 17.2% of male and 19.6% of female drivers used seat belts. The percentage is much lower for the right front passenger and even smaller for the remaining passengers.[5]

With increasing prices in gasoline and interest in compact and subcompact size cars a very good argument can be forwarded mandating passive restraints in all new cars.[6] With an increased awareness of personal appearance and the increased incidence of litigation, facial fractures will continue to play an important role in surgical practice.

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Table 2. Distribution of Cases

	1971	1972	1973	1974	1975	1976	1977
Mandible	37	27	30	19	31	27	32
Zygoma	26	25	33	11	18	28	24
Zygomatic Arch	3	8	8	5	7	11	8
Blow-out	12	13	17	13	2	8	10
Compound Nasal	1	4	7	8	14	7	6
Naso-fronto-ethmoid	3	3	1	1	3	4	2
Frontal Sinus	1	2	2	1	1	2	2
Le Fort I & II	9	7	8	4	3	7	6
LeFort I & II & Zygoma	8	2	2	2	5	3	5
LeFort I & II & Mandible	4	4	2	2	13	10	9
LeFort III	—	—	—	—	1	2	—
TOTAL	104	95	100	66	104	109	104

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The Medical Society of Virginia
PROCEEDINGS

Annual Report of the Executive Vice-President

TIME HAS A WAY of dimming old memories and the pages of history gather more and more dust as the years roll by. Thus it is that the years merge one into the other after a given period of time and only those associated with some special happening or event can be recalled.

It is no different where The Medical Society of Virginia is concerned—we can trace its progress through those years which are readily identified with such issues and events as professional liability, continuing medical education, PSRO, CHAMPUS, Blue Shield, the physician's draft, Medicare and Medicaid, and on and on. And there is one thing for certain—1978 will forever be remembered and identified with a program born of urgency and necessity, administered with imagination, and given the intriguing title of "Vanguard".

Vanguard—just the sight and sound of it are enough to stir the blood of every man of medicine who is ready to meet the challenge of increasing governmental involvement in our nation's health care system. It is a double-barreled program of action and vigilance—a free-wheeling, flexible program designed to move in any direction at any time. It is a well conceived, specialized plan to confront and contain any problem, challenge or threat which might suddenly appear on the medical horizon.

Vanguard should not, however, be thought of as simply a hard-hitting program geared to react to particular situations. It is a great deal more than that. It is also a program of cooperation and assistance—ready to work with Health Systems Agencies, PSROs, allied professions and organizations, etc. It is, simply stated, medicine's first line of defense in Virginia.

The Vanguard program is administered by a Committee which has its own executive secretary and backup consultants. While primarily concerned at the moment with conducting indepth reviews of all HSA plans and developing effective liaison with Virginia's five HSAs, the State Health Coordinating Council and State Health Planning and Development Agency, the program has such long-range objectives as professional and public education, mobilization of both the medical community and public to combat unnecessary government intervention in the health care delivery system and establishment of an early warning and screening system.

The very fact that we are placing so much emphasis on Vanguard is an indication in itself that those days of decision to which we have alluded so often in the past are now at hand. Medicine can do one of two things—it can sit back and take the attitude that we are travelling an irreversible course or it can become a part of the positive approach of Vanguard and have a hand in shaping the future. The choice is easy—because we have no choice. We have an obligation to our state and nation to make sure that health planning is carried out in a sound and sensible manner and that the high quality health delivery system developed so carefully over the years is maintained and not destroyed. To do otherwise is unthinkable.

And now—let us take our annual look at how our Society has fared during the past twelve months.

President and Council.

The one thing we haven't mentioned about Vanguard is that the program is the creation of Dr. Hagood. This will come as no surprise because it takes a very special person to establish a very special program—and Dr. Hagood and Vanguard will always be thought of together.

To simply create something is one thing, but to bring it along step-by-step until it ultimately stands as a classic and inspiring example of

what can be achieved by determined and dedicated men and women is something else. Dr. Hagood was indeed the right man at the right time.

We hear and read a great deal about leadership these days but are fully aware that real leaders seem to be disappearing from the American scene. That is another reason why Dr. Hagood will always be remembered in a special way—he is first and foremost a leader. A real leader is one who inspires others to follow in his foodsteps and to break the restrictive bonds of mediocrity. A true leader is firm and positive in his actions and uncompromising on right or wrong. And—a leader is gentle, considerate and forgiving. He is also open minded and willing to listen to other points of view. But, once a decision has been reached, he moves quickly and with firmness of purpose.

This then is our President, and The Medical Society of Virginia is today a better organization because of his efforts.

Council will have met on six occasions by Annual Meeting time. In addition, the Executive Committee will have met five times—always during the evenings immediately preceding the meetings of Council. Its recommendations have been tremendously helpful in coping with long and sometimes difficult agendas.

Membership.

Membership growth continues unabated. Although the Society is its own best salesman, there are many individuals who have worked long and hard to bring membership to its present record level. Jim Moore and Mrs. Renalds are staff members directly concerned with membership and their efforts have certainly paid huge dividends. A special committee, headed by Dr. Alexander and composed of vice-councilors, has concentrated its activities at the local level, and the Society's story is now being told more than ever before. The following breakdown will be of interest to everyone:

Annual Report, Membership
June 30, 1977—July 31, 1978

June 30, 1977		5,740
New Members	480	
Reinstated	40	
	520	
Deaths	56	
Resigned	55	
Dropped	195	
	306	
Net Increase		214
July 31, 1978		5,954

Finances.

As one can tell from this report, this has been a record-breaking year for The Medical Society of Virginia in so many ways. It will come as no surprise, then, to learn that the demand on our treasury have never been greater—or more justified. Even so, you can rest assured that your Society continues, as always, to operate on a sound financial basis.

We cannot help but mention once again that our dues remain the third lowest in the nation. There are many reasons why the Society has found it possible to accomplish so much with a minimum dues structure and the answers will be found in the Annual Auditors Report and Financial Statement to be published in either the December or January issue of VIRGINIA MEDICAL. We believe it will provide striking testimony to what can be accomplished under our nation's traditional free enterprise system.

Personnel.

Society growth has not been limited to membership. More services are being provided than ever before and your headquarters staff has grown accordingly. We now have 12 full-time staff members—the most recent addition being Len Varmette, executive secretary of the Vanguard Committee. As always, the size of the staff represents the absolute minimum required for the job at hand.

Although we stress the team approach where staff is concerned, the ever changing times have made it necessary to departmentalize more than we really like. For all practical purposes, the work load is broken down under the following departmental headings: General Administration and Services, Legislative Activities, Continuing Medical Education, VIRGINIA MEDICAL, Membership, and Vanguard activities. Perhaps we should mention at this time that your Society is providing routine administrative services to one specialty organization on an experimental basis. Several others have expressed interest in the new program and might well wish to give it a try in the very near future. The services are provided on a strict cost basis. Mrs. Strawderman will serve as executive secretary to the participating specialty societies.

Your Executive Vice President would like to thank all members of the staff for their loyal and enthusiastic support. Each is someone very special and it is hoped that all members attending the Annual Meeting will have an opportunity to meet Mrs. Brown, Mrs. Strawderman, Mrs. Gray, Mrs. Candler, Mrs. Ambrose, Mrs. Stockmar, Mrs. Renalds, Mr. Moore, Mr. Osburn, Doctor Summers, and Mr. Varmette.

Virginia Medical.

VIRGINIA MEDICAL is not resting on its laurels—even after being named best in the nation last year. You will recall that our journal walked off with top honors in the 1977 medical journalism competition sponsored by Sandoz Pharmaceuticals. Since that time, Mrs. Gray and Dr. Thompson have continued to improve the publication in both content and format. It is understandable, therefore, why reader

interest has never been greater.

The advertising situation shows definite signs of improvement—good news after the decline which began as far back as the middle 1960s. A recent adjustment in the advertising rate structure has resulted in a sizeable increase in advertising revenue. As a matter of fact, an increase in revenue for the first six months of this year has amounted to more than $10,000.00.

We are particularly pleased with the manner in which VIRGINIA MEDICAL is fulfilling its responsibility as the voice of the Society. Never before has the membership been so well informed as to what goes on and never before has the official publication of the Society been better utilized in a supportive capacity.

Headquarters Building.

The new wing of our headquarters building has been completed—and not a minute to soon. Four new offices on the second floor are in daily use and the attractive and spacious board room has made it possible to bring Council "back home". The room accommodates a gathering of 50 very nicely and provides meeting space sorely needed for so long. And—the new wing is all paid for—something of an accomplishment these days!

Meetings.

It has often been said that one could attend at least one or two meetings every week of the year if he or she were so inclined and had the time. That saying has never been more true than right now, and, consequently, it is necessary that we be as selective as possible in determining when and where the Society should be represented. To complicate matters, AMA meetings of considerable importance have been held in such places as London and Toronto—the subject matter being national health service systems and the many lessons to be learned. Unfortunately, it was not possible for the Society to be represented at those particular meetings.

Dr. Hagood continued the policy of making sure that Society representatives attended only those meetings which could be justified on an "investment and return" basis. Your Society was therefore represent at all sessions of the AMA House of Delegates, AMA National Leadership Conference, two meetings of the State Board of Medicine, conferences of state society presidents, Virginia Council on Health and Medical Care. 4-H Club Health Awards ceremony, three board meetings of the Virginia Professional Standards Review Foundation, annual meetings of five neighboring state medical societies, a National Legislative Conference for specialty groups, Conference of State Journal Editors, numerous component society meetings, Conference of Southeastern Medical Societies, Emergency Legislative Conference in Washington, Annual Congressional Luncheon, and many others.

Annual Meeting.

We will be trying something new this year during the Annual Meeting and believe that it will prove beneficial to everyone. Reference Committees will meet on Friday morning, November 3, rather than the afternoon as in the past. This will enable the Committees to spend more time on the preparation of their reports and should permit an earlier distribution.

The Friday scientific programs will be presented in the afternoon and this, too, should work to everyone's advantage.

Technical and scientific exhibits promise to be the best ever. A total of 47 exhibits—including 35 technical—will be on display in the North Ballroom, the Auditorium Foyer, and the North Gallery. This is easily the largest number of exhibits we have had in the last 15 years and the committee could have accepted several others if adequate space had been available.

The Future.

Clouds of uncertainty and confusion obscure the northern banks of the Potomac and make it increasingly difficult to differentiate between fact and rumor. The cries for national health insurance continue to be heard, but those who cry loudest have yet to come forth with a reasonable and realistic plan for financing what could very easily become the last nail to be driven into the lid of the nation's economic coffin.

The overall situation is bad at best but the complications resulting from political manuevering make it that much worse. For some unknown and mysterious reason every administration considers it absolutely essential to promise national health insurance within a "reasonable" period of time. They refuse to believe the many surveys which have been consistent in their failure to detect any great or growing interest in NHI. But—the nature of politics is such that the obvious is all too often shunted aside in the mistaken belief that a "giveaway" is necessary when vote gathering time approaches. The tragedy, of course, is that "giveaways" do not exist—and never have. The cost of such misguided reasoning is economic disaster.

Whether the present administration is determined to load some type of NHI on the back of an already exhausted American public—or whether it is simply making the usual political noises—is difficult to say. We should know fairly soon, however, because Mr. Califano is not known as a patient man and is almost certain to tip the administration's hand in the very near future. Now, then, is the time to mobilize for action and prepare for any eventuality. The place for Virginia physicians is in the Vanguard!

Robert I. Howard,
Executive Vice President

PROGRAM

Note: To remove your program for the Annual Meeting, loosen staple and pull booklet loose.



Annual Meeting
Wil



, November 2-5,
burg

Annual Reports of Committees

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Auxiliary Advisory

The President's appointment of Chairman of the Advisory Board to the Auxiliary of The Medical Society of Virginia is intended to serve as a liaison between the Auxiliary and the Council when the Council is not in session. The Committee is very rarely called upon. However, like a fire department, it serves a useful standby purpose and, I believe, should be continued.

The Committee has no recommendations to the House.

Raymond S. Brown, MD,
Chairman

Advisory Virginia Hospital Association

The purpose of this Committee is to provide effective liaison between the physicians of this Commonwealth and its hospitals.

The Committee should continue to function so mutual problems may be recognized and met in such manner as to provide the best possible health care for the people of Virginia.

This Committee met in Richmond, Virginia on March 13th, 1978. The Medical Society of Virginia was represented by the President, Dr. William J. Hagood, Jr., and Dr. John T. Myles. Discussion centered around medical cost containment, with particular reference to the recently-enacted Virginia Senate Bill #259, which establishes a Virginia Health Services Cost Review Commission, to which health care institutions shall report their expenses and incomes to the governor and to the General Assembly. Our Society endorsed this bill, and this committee feels it encompasses the objectives of the Virginia Senate Joint Resolution #5, the American Hospital Association Steering Committee Report dated December 23rd, 1977, and the Voluntary cost Containment Program endorsed by the AMA, the AHA, and the FAH, dated December 27th, 1977.

It remained for this Committee to formulate the particular recommendations to Council it felt might be appropriate for the physician segment of Virginia's health care providors, and so the physician portion of this Committee met in Richmond on April 28th, 1978. Committee members present were Drs. Edward Bear, James Snead, J. L. Ware, and John Myles. We were fortunate to have Dr. William Hotchkiss join us in our deliberations.

We concerned ourselves primarily with medical cost containment and looked in detail at the AMA-endorsed "Summary Report of the National Commission on the cost of Medical Care". We felt many of the



Doctor Myles

48 recommendations, detailed in some 15 pages, had merit, but we felt others had no merit or were contrary to the health interests of Virginia's people. A detailed sentence-by-sentence report on that Commission's report has been submitted to Council, and its reproduction here would not be feasible. As a Committee, we felt strongly that *effective*

medical cost containment implies some consumer sharing in medical cost at the time care is provided, per incident or per hospitalization.

A hospital's requirement that staff members must provide certification as to their professional liability coverage was discussed, and the minutes of Council dated September 17th, 1977, were recounted, in which Mr. Goolsby, the Society's attorney, said that in his opinion such requirement would quite likely be upheld in the courts.

John T. Myles, MD
Chairman

AMA Delegates

The Medical Society of Virginia was represented by its full delegation during both meetings of the AMA House of Delegates. These were unusually busy meetings—with an unbelievably heavy volume of business. For example, during the June meeting in St. Louis the House



Delegate Carmines

considered more than 300 recommendations, reports and resolutions. This was easily a new record.

The June meeting also found specialty organizations being represented for the first time on a direct basis. The AMA House of Delegates has frequently been called the "Congress of Medicine" and that description has never been more appropriate. The House now has representation from 55 states and territories and more than 50 specialty societies.

Time and space will obviously prevent our presenting a detailed report on the many items of business addressed by the House. A complete report, however, has been published in the *American Medical News* and is recommended to the membership as "must" reading. Certainly those sections covering cost containment, national health insurance and medical ethics deserve your every consideration.

We cannot help but note that the June meeting marked an end to a tradition that goes back many, many years. No longer will the House meet in conjunction with a large clinical session. The clinical meeting has been discontinued and will be replaced by a number of regional seminar programs.

Your delegation takes this opportunity to remind you of the opportunity provided by the House for grass roots participation in AMA policy development—policy which can have a very definite effect on your practice. Please stay in touch with your Virginia delegates and alternates and let them have your views on the pressing issues which confront us all. It is our wish to represent you as effectively as possible.

F. Ashton Carmines, MD,
for the Virginia AMA Delegation

Cancer

The purpose of the Cancer Committee is to oversee all of the cancer activities in the state of Virginia. Over the years, the Cancer Committee has worked very closely with the Virginia Division of the American Cancer Society, the State Health Department and the oncology divisions of all three state medical schools. It is the single committee or agency in the state which tries to coordinate and bring together these various different organizations.

The Cancer Committee feels very strongly that it should continue as a major committee of The Medical Society of Virginia. In past years, various organizations concerned with cancer control throughout Virginia have used the Cancer Committee of The Medical Society of Virginia whenever questions have arisen requiring approval and cooperation with the practicing physicians throughout the State. No other single committee or organization has the ability to speak for the medical profession in the way the Cancer Committee does. In the matter of legislative action alone, no single organization has the ability or authorization to speak for the medical profession, when the need should occur. Last year, through the combined efforts of many organizations, plus The Medical Society of Virginia, we were able to get the legislature to support a Tumor Registry for the state of Virginia, and to provide funds for this Registry for the next biennium.

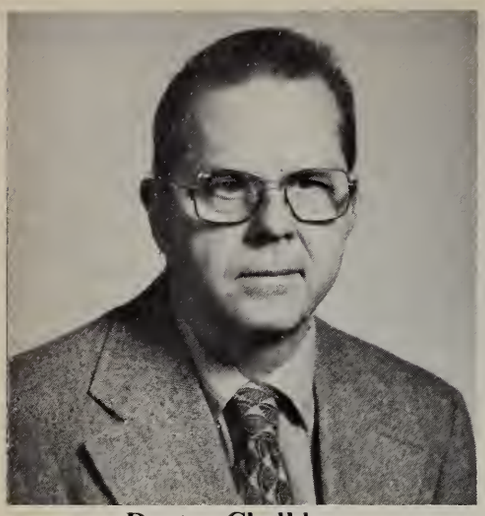
The Cancer Committee has no specific recommendations to make to the House of Delegates or to the officers of the Society at this time.

Claiborne W. Fitchett, MD,
Chairman

Child Health

The Committee on Child Health held one formal meeting during the year, and all members were present. It considered such matters as pre-college physical examination forms, statutes of limitations for minors, and certificates of physical fitness for minors.

Your Committee has been most active over the years. It has consistently reviewed various items brought to the Society's attention relating to child health, and consequently made many recommendations to Council. The working relationship with the Bureau on Child Health, State Health Department, is



Doctor Chalkley

excellent, and, therefore, the Committee has a broad knowledge of activities throughout the State.

In view of the continuous activity, we feel the Committee serves a most useful purpose to the Society. Since your Committee has resolved, or is in the process of resolving, the matters referred to it during the past year, there are no recommendations for the House of Delegates.

Thomas S. Chalkley, MD,
Chairman

Conservation of Sight

The Committee has not seen the necessity of having a special meeting during the year since all of the Committee members are directly working to preserve the sight of all persons in the Commonwealth of Virginia, particularly in regards to the inroads of paramedical people into the medical field.

Each member of the committee has worked closely with the Virginia Society of Ophthalmology and Otolaryngology in this regard, and would like every member of The Medical Society of Virginia to be aware of the threat of untrained individuals seeking to practice medicine, such as the optometrists in the use of drugs and the making of diagnoses in primary care of patients with eye diseases.

It has been recommended that this Committee be discontinued since there is a similar committee called "The Sight Conservation Committee" of the Virginia Society of Ophthalmology and Otolaryngology, and the members of this Conservation of Sight Committee have concurred in this suggestion.

W. Conrad Stone, MD,
Chairman

Editorial Board

Your Editorial Board has endeavored during the year to maintain the high standards established by this journal during its long existence and to continue to serve faithfully the members of The Medical Society of Virginia. Consonant with this aim, we have published news and official communications of the Society, scientific articles, and opinions and expressions by our readers regarding a variety of issues. We hope that these have been of interest and of benefit.

We have been gratified by the number and quality of manuscripts submitted and by the interest in VIRGINIA MEDICAL exhibited by the membership. We hope that the coming year will see even more involvement by our readers in all facets of the journal.

The membership may be interested to know of an important financial step whose effects began to appear this year. This was the revision of the journal's advertising rates. Although print costs accelerated sharply in the last decade, our ad rates did not, and an analysis by our new printer, the William Byrd Press, revealed that our ad rates were barely covering the cost of printing the ads. Major revision was in order, obviously. We found and hired a team of consultants, thoroughly experienced in medical journal advertising and management, to go over our financial structure and advise. They recommended that we triple our ad rates, a radical escalation. With some trepidation, we followed that recommendation.

To our relief, only a small proportion of our regular advertisers did not renew their contracts when the new rates became effective. A few went to every-other-month instead of every-month, and one decreased the size of the ad, but most accepted the escalation and continued as before, with good grace and understanding. It was a tribute to the esteem in which The Medical Society of Virginia and its journal are held.

The result of this rate increase in dollars and cents is very good news. Totalling the revenue of our "local" ads (those that come to us directly) and our "national" ads (those that come to us from the Bureau of State Medical Journals in Oak Park, Illinois), we show an increase of $10,297 for the first six months of 1978 over the same period last year, like this:

VIRGINIA MEDICAL
Advertising Revenue
January through June

	1977	1978
Local	$ 5,240.	$ 8,312.
Bureau	6,117.	13,342.
Total	$11,357.	$21,654.

We hope these new rates can be held constant for several years, but we shall watch the financial picture carefully to be sure they are kept at a healthy level. VIRGINIA MEDICAL is a non-profit journal, of course, but its advertising should contribute substantially to its costs of publication.

In addition to the increased revenue of our display ads, our new classified advertisements department has come along very nicely and is now contributing to the journal's revenue about $1000 each year.

We are grateful to the MSV members and friends who have patronized the classified ad department, and we very much appreciate, too, the contributions for our Letters to the Editor, Who's Who, and Editorial pages. These communications

give our journal a distinctive personal tone and markedly enhance our readership.

W. T. Thompson, Jr., MD
Editor

Ethics

Although no matters requiring a formal meeting were referred to this Committee during the past year, its continued existence is of utmost importance. We would, therefore, urge that its status as a standing Committee remain unchanged.

Events of the past two years have made it necessary to take a new look at the Principles of Medical Ethics as set forth by the American Medical Association. Recent court actions have resulted in new distinctions between advertising and solicitation and point up the need of a thorough and in-depth review of the complete set of Principles and their interpretation by the AMA Judicial Council.

The AMA is, in fact, in the midst of such a review and a proposed revision of the Principles is expected to be acted upon by its House of Delegates in December. The revision, among other things, will seek a proper and reasonable balance between professional standards and contemporary standards of federal and state anti-trust law. To assure that such professional standards are not misunderstood or misinterpreted, the revision will attempt to express these basic concepts in a form and manner consistent with current, valid legal considerations. Since freedom of choice and free competition among physicians are considered to be prerequisites for optimal medical care, the revision is intended to preserve these concepts in our changing society in such a manner as to continue the tradition of professional protection of patients and the public.

Your Committee will keep an interested eye on the AMA proceedings and expects to have some observations on the revised Principles once they are officially adopted. At this time, however, the Committee has no recommendations for the House of Delegates of The Medical Society of Virginia.

Hugh G. Stokes, Jr., MD,
Chairman

Emergency Medical Services

I believe the purpose of this committee is: 1) to keep the constituency of The Medical Society of Virginia informed about the ongoing development of a comprehensive statewide emergency medical services



Doctor Rudolf

system, 2) to make physicians in the state aware of those geographic areas that need physician input in the development of more comprehensive emergency medical services, 3) keep The Medical Society of Virginia informed as to current legislation and proposed legislation as it relates to emergency medical services, 4) to continually remind physicians that emergency medical services systems must be under medical control and 5) to have society input to the Governor's Advisory Committee on Emergency Medical Services about unfulfilled needs and problems in existing regional effort.

I feel that our committee should be continued in an attempt to improve the bilateral communication between the Bureau of EMS in the State Health Department and physicians concerned with emergency medical services throughout the Commonwealth. The committee has no specific recommendations for the House of Delegates but feels that there ought to be an annual report.

Leslie E. Rudolf, MD,
Chairman

Grievance

This Committee has met on one occasion and carried out its duties as prescribed by the Society's constitution and by-laws. It is felt that the Committee functioned properly and it apparently carried out the purposes of the Committee to the satisfaction of all concerned.

This Committee apparently had not had meetings for over 30 years, and it is hoped that we will not have to function too often.

This Committee, therefore, will be a permanent committee as it is so designated by the constitution and by-laws of the Society.

Carl E. Stark, MD,
Chairman

Health Careers

This Committee was organized mainly to work with the Health Careers Program of the Virginia Council on Health and Medical Care. During the past year this program was presented in 211 schools to an audience of 31,123 students, most of whom were in high school. Requests for information were received from 31,198 students, 967 of whom requested more data on medicine as a career.

The Committee has not met as a group, but the Chairman has individually acted upon pertinent matters in addition to consulting with staff of the Health Careers Program where indicated.

Meetings of the Committee are usually unnecessary, but there must be some point of contact between persons seeking information on careers in medicine and The Medical Society of Virginia. It is the Chairman's recommendation that, instead of a committee, one member of the Society be appointed as liaison to the Health Careers Program of the Virginia Council on Health and Medical Care. This member, in turn, should be able to call upon members nominated by constituent local medical societies in Virginia for assistance when required. A recommendation similar to this was made in 1973.

F. J. Spencer, MD,
Chairman

Highway Safety

The Committee's purpose shall be to promote highway safety in the Commonwealth of Virginia by working through The Medical Society of Virginia to pass such resolutions and support such legislation as it appears when it is in the best interest of highway safety. The Committee also serves as a clearing house, or forum, for discussion from any other lay groups when items of a medical nature should be brought before the Society. Because of these functions, this Committee should be continued.

The Highway Safety Committee will devote the major portion of its attention this year to promoting the use of safety restraints in infants and children and will assist in the implementation of a traffic medicine course in Virginia's medical schools.

Robert W. Waddell, MD,
Chairman

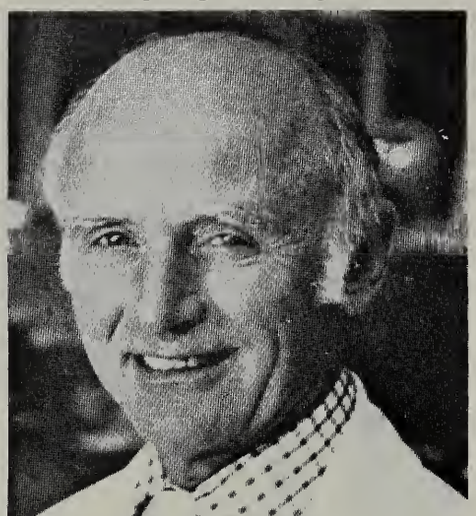
Insurance

The Committee has met on two occasions during the year to review all of the programs sponsored by the Society. Since the third meeting will be held prior to the Annual Meeting in Williamsburg, it is likely that a supplemental report will be presented to the House of Delegates. The Committee will be considering proposed changes in the administration of the Society's overall insurance program.

J. William Giesen, MD,
Chairman

Joint Practice

The Joint Practice Committee of the Virginia Nurses' Association and The Medical Society of Virginia met on April 19, 1978, at our regular biannual spring meeting. We were



Doctor Cook

requested by the Joint Boards of Medicine and Nursing to give our opinion concerning the function of nurses as first assistants in the operating room. As a result, we suggested the following minimum standards be developed for nurses in order for them to function as first assistants:

Recommended Revisions of Guidelines for Registered Nurses as First Assistants in Surgery

I. To be certified in the State of Virginia as first assistant, the individual must be a registered nurse, licensed by the Virginia State Board of Nursing.

II. Must have demonstrated proficiency in the capacity of circulating nurse and scrub nurse. This registered nurse must also have served in the operating room a minimum of one (1) year. Proficiency in both capacities and time of service must be attested to, in writing, by the hospital's appropriate committee.

III. Having complied with I and II, the registered nurse must:

A. Demonstrate proficiency in these 11 functions: sponge, clamp, tie, suture, suction and cauterize, retract, minor cutting, cut suture, approximate skin for use of staples, staple skin, prep and assist with draping.

B. The qualifications of nurses acting in this capacity will be established by an appropriate committee within the hospital.

C. Proficiency gained in each function will be under the direct supervision of the operating surgeon, at all times, with the approval of the immediate nursing supervisor.

IV. Having complied with standards I, II and III, the registered nurse will be certified as proficient in the function of first assistant by the appropriate hospital committee. The committee will advise the Virginia State Board of Nursing of compliance.

A. An accurate record of all cases on which the registered nurse functions as first assistant is the responsibility of the individual. These records are to be validated by the immediate nursing supervisor.

B. The registered nurse certified as proficient as first assistant is always under the direct supervision and guidance of the surgeon while serving in the position.

V. The individual registered nurse's proficiency in this capacity will be monitored by the appropriate hospital committee. Should the proficiency fall below standards acceptable to the committee, certification will be rescinded until the committee is satisfied with necessary improvement. Before any such action is taken, the registered nurse has the privilege of appearing before the committee for the purpose of speaking in his behalf. The Virginia State Board of Nursing will be immediately advised of the rescinding and subsequent reinstatement, if warranted.

The Committee also felt that a Formulary should be developed for use by nurse practitioners although it is recognized that various physi-

cians and nurse practitioners may have different operating procedures from the standpoint of drug usage for various conditions.

The Committee reviewed its purpose as stated in its bylaws and agreed that it was still pertinent, to promulgate better development of health care delivery in the State of Virginia through coordination of the services of physicians and nurses.

The Committee members felt that this Committee should be continued as a worthwhile exchange of information and ideas has taken place.

Also, we have learned through our survey conducted last fall that there is already a considerable amount of discourse occurring between nurses and physicians under other names than joint practice committees. These take place mainly within hospitals on various hospital committees.

Our committee had no recommendation at this time.

C. Barrie Cook, MD,
Co-Chairperson

Judicial

The Judicial Committee of The Medical Society of Virginia has had no matters referred to it for consideration during the past year. For this reason, we have not held any meetings.

W. S. Hotchkiss, MD,
Chairman

Liaison to State Bar

This Committee was originated to hear proposed malpractice actions against members of the Society. As indicated by the title, we operated jointly with a committee from the State Bar as a screening panel. Until last year we served quite a useful function. The state legislature now has provided screening panels as a service of the Commonwealth.



Doctor Nipe

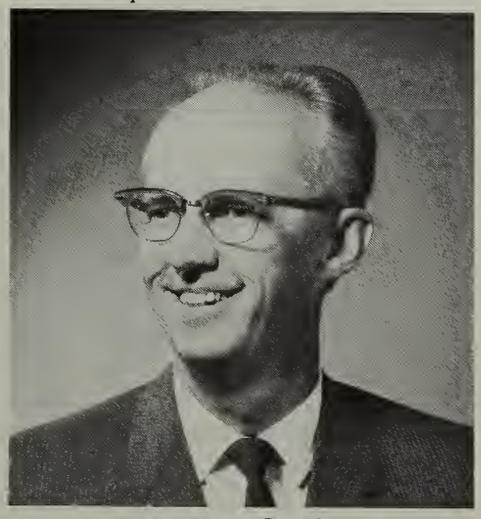
Our only meeting last year was at the request of our opposite members from the State Bar. The attorneys requested a meeting with us again so that the above mentioned might be discussed to our mutual advantage.

The primary function of this Committee has been superseded and the Committee is no longer needed.

George M. Nipe, MD,
Chairman

Long-Range Planning

This Committee has had no meetings this year as a majority of its work has been done in the last several years. It is felt, however, that there will be a need from time to time for the committee to function at the request of the President.



Doctor Stark

It would appear that future needs could be referred to this Committee and in all likelihood it should continue as a committee of The Medical Society of Virginia.

Carl E. Stark, MD,
Chairman

Malpractice Countersuits

This Committee has almost the same members as the Liaison Committee.

Panels are drawn from the Committee when a physician and his attorney request a hearing. The Committee assesses the evidence and advises the physician and his attorney about the strength of a proposed countersuit. The Commitee can provide no financial support, only its opinion about the advisability of a countersuit. So far three physicians have requested a panel and have been heard at the earliest possible moment.

I feel that this function of the Committee should be continued.

George M. Nipe, MD,
Chairman

Maternal Health

The purpose of the Committee is to investigate maternal mortality in Virginia and to be the technical consultants for all obstetric and gynecologic matters that come to the attention of The Medical Society of Virginia.

We feel the Committee should be continued. The Committee would like to expand its activities to include evaluation of maternal morbidity and perinatal mortality. It would like to become more involved in making the information gained from its investigations available to all physicians in Virginia to help them practice with a better understanding of obstetrical and gynecological problems. The Committee is also involved in the regionalization

of obstetric, gynecologic, and pediatric care in Virginia. This area of regionalization is a vital concern to all practicing physicians in Virginia.

The Committee has no recommendations at this time.

Leo J. Dunn, MD,
Chairman

Membership

This Committee is pleased to report that no major problems were brought to its attention during the year and, consequently, no meetings were held. Regardless, however, we feel very definitely that the Committee should always be available to assist headquarters staff when problems do arise and recommend that it be continued.

We are especially pleased that the Society is on the verge of reaching the 6,000 member level—truly a major accomplishment. The Committee takes this opportunity to welcome the nearly 500 new members and urge that they familiarize themselves with the Society's many services and benefits.

It is with the greatest possible pleasure that your Committee recommends to the House of Delegates that Dr. William J. Hagood, Jr., be elected to honorary active membership. The accomplishments of Dr. Hagood will be covered in other reports, but we would like to add that no President has ever had a greater impact on medicine in this state. It has been said that Dr. Hagood is the right man for this particular period of Society's history and we heartily agree. He takes with him our sincere best wishes and gratitude.

James N. Cooper, MD,
Chairman

Mental Health

The Mental Health Committee of The Medical Society of Virginia met on June 23, 1978. Invited guests was Dr. Leo E. Kirven, Acting Commissioner of the Department of Mental Health and Mental Retardation.

Mr. Osburn, administrative assistant of The Medical Society of Virginia, gave a brief report on legislation passed during the 1978 session of the Virginia General Assembly. Of particular interest to the Committee were changes in the risk management legislation of the previous year, confidentiality of psychiatric records, direct payment of third party carriers to social workers, and several bills introduced by the State Board of Medicine regarding disciplinary measures.

One of the members of the Committee who is quite knowledgeable concerning the background of the social worker bill (HB 501) led the discussion concerning plans to oppose this bill during the 1979 session of the General Assembly. A letter from the president of the American Psychiatric Association to the Hon. Hunter B. Andrews, Chairman, Senate Education and Health Committee, opposing the social worker bill was reviewed by the Committee.

Dr. Kirven cited several new developments in the Department of Mental Health and Mental Retardation during the past year. He pointed out that this department will now be responsible for all costs involved in the commitment of patient to mental facilities. Dr. Kirven noted that children cannot be housed with adult patients in the future. He discussed the bill relating to confidentiality of psychiatric records. He pointed out that of the original 31 outpatient clinics established a few years ago, there are only five in operation by the state at the present time; most clinics have been taken over by localities who are responsible for their operation. Dr. Kirven stated that very likely during the 1979 General Assembly there would be changes in laws dealing with commitment procedures and bills to provide insurance coverage for alcoholism.

There was discussion concerning continuing medical education. One member of the Committee felt that continuing medical education does not necessarily mean patient care generally is improved and that 60 hours or more per year does not necessarily improve competency. He felt that localized programs were far more effective than larger decentralized programs. There was discussion by the Committee of state-wide specialty programs in the field of continuing medical education.

The Impaired Physician Program came in for much discussion by the Committee. A member of the Committee who has had much experience in this field led the discussion. He pointed out that the House of Delegates of The Medical Society of Virginia had approved the concept of such a program and had referred the matter back to the Committee for action. In view of this action he felt that a subcommittee should be appointed to recommend a program stressing primarily rehabilitation on a local level and on a voluntary basis. Adequate time should be allowed to determine if the program is to prove effective. It was the feeling of most of the Committee members that legislation could prove ineffective and would actually weaken the reporting mechanism.

It was the decision of the Committee that the recommendations of the Committee concerning the Impaired Physician Program be forwarded the Council of The Medical Society of Virginia. A special meeting of the Committee was scheduled for October 13, 1978 to discuss and make further recommendations concerning the Program.

The Committee reviewed the proposed Inpatient Psychiatric Benefit Guidelines to be implemented by Blue Cross-Blue Shield Plan of Virginia. It was pointed out that a committee representing the Neuropsychiatric Society of Virginia, the Virginia Committee of the National Association of Private Psychiatric

Hospitals, the Virginia Hospital Association and the Virginia Society of Adolescent Psychiatry invited this Committee to join in studying the guidelines with the idea of suggesting changes or counter-proposals if advisable. The Chairman was asked to meet with the committee representatives with the understanding that he would inform the other members of the Committee about any action.

The Committee recommends:

1. The Society reaffirm opposition to HB-501 (direct payment to social workers), as not being in the best interest of patients, carrying with it the potential of being expensive and adding to the cost of patient care.

2. A letter be written to the State Board of Medicine requesting the matter (HB-501) be referred to the Board of Medicine Legislative Committee for a position statement concerning this bill.

3. The Society's position on Continuing Medical Education emphasize and establish local programs of continuing medical education whenever and wherever possible.

4. The Council of the Society to appoint a special committee, consisting of other specialities besides psychiatry, to implement an impaired physician program on a Society level.

5. The Society send two (2) representatives (a psychiatrist and possibly a family practitioner) to the AMA Third Annual National Conference on the Impaired Physician to be held in Minneapolis, Minnesota on September 27th through October 1st.

The Chairman wishes to express to the members of the Committee, Mr. Robert I. Howard, and Mr. Osburn this appreciation for their cooperation in the formulation of this report. It is the Chairman's recommendation that this Committee be continued.

John R. Saunders, MD,
Chairman

Negotiations

The Negotiations Committee, newly formed this year, is in a developmental and educational state. Negotiation is an art and skill that must be learned by each Committee member. All members of the Committee have attended the introductory seminars on negotiations. Two members attended the advanced course, conducted by the American Medical Association, at Scottsdale, Arizona, in April 1978. The educational programs are designed to develop medical professionals and executives into effective negotiators. The Medical Society of Virginia is sponsoring an advanced seminar in negotiations on October



Doctor Hulley

6, 7 and 8, 1978, in Arlington, Virginia, and Committee members were encouraged to attend.

In 1976, the AMA Board of Trustees approved the formation of a department of negotiations. This department has two primary objectives: To improve the negotiating skills of county, state, medical specialty executives and members through a formalized educational program, studying techniques, strategies, tactics, and goals of negotiations; and to assist members, if requested, in negotiations with hospitals, insurance carriers, governments and others. (The MSV House of Delegates directed that the Society be the negotiating agent for members.)

Each member of the Committee has been requested to indicate his particular interest in the negotiating process. A subcommittee, headed by Dr. K. K. Wallace, Jr., has been designated to study the problem concerning hospital-based physician contracts.

A meeting of the Committee will be held in September to consider further refinements in the organization of the Committee, educational requirements, functions of the Committee, and the development of practical skills. A letter will be sent to each committee member with an agenda of proposals to be considered.

Levi W. Hulley, Jr., MD,
Chairman

Pharmacy

The Pharmacy Committee of The Medical Society of Virginia has not met as a body since the last annual report. The Committee has remained active, however, through scheduled meetings of the Joint Virginia Medical Society/Virginia Pharmaceutical Association Professional Relations Committee. The Society is represented by Dr. Marvin L. Weger, Dr. Herman M. Nachman, Dr. Lloyd T. Griffith and Mr. Will Osburn, administrative assistant, Medical Society of Virginia. The Joint Committee promises to be especially useful to the Society because of the obvious mutual interest in the pharmacy area by the two professions. The Joint Committee met December 14, 1977 at Byrams Restaurant and approved the following recommendations amended by the House of Delegates of The Medical Society of Virginia.

1. All prescriptions must be initiated by the prescribing physician. Authority to dispense may be provided by his signature on the prescription or by direct presonal communication by the prescribing

physician to the pharmacist.

2. When a prescription has been filled or refilled the maximum number of times as initially designated, it is an expired prescription. Authorization to refill an expired prescription must be obtained by the pharmacist by direct personal communication with the prescribing physician or an assistant under the physician's direct and immediate supervision, or by a new prescription.

3. When a pharmacist has concern in his own mind about the timeliness of a prescription refill, patient's need, and all other factors that demonstrate the appropriateness of the physician contact, he should contact the physician for the purpose of obtaining authorization to fill or refill the prescription.

4. Patient Profiles maintained by the pharmacist which document the patient's drug history are considered important documents that would be available to assist the pharmacist in familiarizing the physician with the patient and concurrent drugs prescribed by other physicians.

5. Using the patient as an intermediary in communications between the physician and pharmacist is unacceptable, e.g., the physician should not tell the patient to inform the pharmacist that the physician approves additional refills of a prescription.

6. The Committee encourages abolishment of the term "PRN" as a prescription refill authorization and recommends that physicians be specific in designating 1) the frequency, 2) a maximum time limit, 3) a maximum number of refills.

These recommendations were presented to the Council of the Society during its February 4, 1978 meeting.

The Joint Committee met again on April 12, 1978 at the VPhA Headquarters. Agenda items were 1) Polyprescriptions. It was pointed out that it is a violation of the Virginia Drug Code to include drugs from different schedules on one prescription blank and that polyprescriptions present a major record-keeping problem and increase the potential for prescription error. A letter to the editor of the VIRGINIA MEDICAL detailing the problem was drafted. 2) Maximum allowable costs and Medicaid provider number. The problem of pharmacists' necessity to identify prescribing physicians by their Medicaid provider number on pharmacists reimbursement claim form when the pharmacy has no record of the number was brought out and was referred to Dr. Hays, director of the Virginia Medicaid program. Maximum allowable costs under the Medicaid program were perceived to be a federal attempt to pressure dispensing of lowest cost drugs without regard to quality and patient service. 3) Telephone prescriptions. A line of discussion of this previously detailed modality of originating and refilling prescriptions was inconclusive.

Another Joint Committee meeting was scheduled for September 27, 1978. Copies of letters from concerned Society members were referred by the Society to the Committee detailing the training and practice sphere of the pharmacist practitioner who assumes responsibility for patient care when drugs and related treatment are utilized and the establishment of a nursing formulary in Virginia from which nurse practitioners would be authorized to prescribe to their patient.

Lloyd T. Griffith, MD,
Chairman

Rehabilitation

The Rehabilitation Committee has as its purpose the provision of consultation and assistance to the Virginia Department of Vocational Rehabilitation regarding medically related matters. This Committee serves a very important function in assuring that there is major input from the medical community regarding governmental rehabilitation policy, particularly policy established by the Department of Vocational Rehabilitation. The policies of this Department have considerable impact on the medical community and patient care and input into its policy formation is deemed to be highly advisable. Therefore, the continuation of this Committee is recommended.

A number of issues were discussed and recommendations were made at the meeting of the Rehabilitation Committee on September 18, 1977, at the Woodrow Wilson Rehabilitation Center in Fisherville, Virginia. Ten of the 16 members were present. Also attending this meeting were representatives from the Department of Vocational Rehabilitation.

At this meeting, the issue of the requirement by the Department of a serology blood test for syphilis on its general medical form was discussed. The recommendation was made to the Department to drop the serology test from the general medicals and that such test be left to the discretion of the examining physician. The committee also overviewed this form and made suggestions as to how this form might be revised.

The Committee recommended to the Department that joint replacements other than hip should be considered on an individual basis by appropriate agency medical staff and that caution should be exercised in approving joint replacements other than hip.

The issue of utilization by the Department of a Pain Control Clinic in Staunton, Virginia, was discussed and it was decided that the decision on this would be tabled until the Committee received further information about this clinic.

The issue of utilization of chiropractors by the Department was discussed at some length. The recommendation to the Department was that the Department maintain its policy of requiring a general medical examination and/or appropriate medical personnel specialist's exam-

ination and that chiropractors be used only when such services were recommended by a physician.

A motion was made, seconded and passed by the Committee that the Department adopt a dollar conversion factor for its fee schedule of $6.25. The Committee also recommended various diagnostic fees for utilization by the Department. The Committee went on record as recommending to the Department that it change its medical fee schedule to use current procedural terminology.

During the year, the Committee has provided considerable advice and consultation and direction to the Commonwealth of Virginia, particularly to the Department of Vocational Rehabilitation, regarding medically related matters. Throughout the year members of the Committee are called upon by the Department for their assistance and consultation regarding activities and policies related to their medical specialties. This has been a most active and productive year for your Rehabilitation Committee; however, there are no recommendations which require action by the House of Delegates.

Alexander McCausland, MD,
Chairman

Scholarships

The Medical Society of Virginia has, for a number of years, made an annual contribution to the scholarship program of each of Virginia's three medical schools. Many deserving students have been helped by these special funds and the deans of all three schools work closely with the Society to assure the program's success.

It has been the wish of the Society that those students who benefit from the program be made aware of The Medical Society of Virginia—its purposes and its goals. This Committee was appointed for the purpose of making sure that this objective is being realized.

The deans of the various schools were contacted and offered some very interesting suggestions. The thought was expressed that perhaps those students receiving assistance from the scholarship fund should be invited to attend at least one meeting of Council. It was also suggested that recipients be invited to attend all or part of an annual meeting. Your Committee believes these two suggestions are worthy of serious consideration.

It is also recommended that scholarship fund recipients be legal residents of the state of Virginia at the time application is made for admittance to medical school.

It would appear that the Committee has completed its assigned task and its continuation is not recommended.

Emmett C. Mathews, MD,
Chairman

Sports Medicine

The Sports Medicine Committee has taken an expanded and increasingly productive role in the health and welfare of the athletic citizens of the Commonwealth. Specific progress has been made in the following areas:

1) An enhanced relationship with the Virginia High School League, culminating in a very successful 3-hour prime time program delivered to the Annual Coaches Clinic on July 20, 1978. Progress has already been initiated regarding the 1979 program.

2) Increasing liaison for regional programs. A 45-hour course was given in Northern Virginia in 1978 under the auspices of the University of Virginia division of continuing education. Further dialogue to solidify this program and expand to other areas of the state is underway.

3) An expanding relationship with emergency personnel to aid in staffing athletic events as well as participation in our educational programs.

4) Contact with medical or other interested industry to underwrite the costs of educational programs, including the potential of audio-visual aids.

5) Provide legislative support and leadership for a Virginia athletic trainers act.

6) Initial contact with AAU officials regarding educational and medical staffing aid to AAU events.

7) Consideration and further efforts to instituting practical programs of office management of sports medicine programs (both recreational and varsity athletic) directed toward primary care physicians (perhaps as an adjunct to the Annual Meeting of The Medical Society of Virginia).

8) Initiate regional athletic physician groups under the leadership of component medical societies to aid, identify and resolve regional difficulties and further enhance regional educational needs.

The Chairman of the Sports Medicine Committee is appreciative of the efforts of athletic trainers Joe Gieck, Gary Carlton and George Borden; physicians Virgil May, MD, and E. L. Clements, MD, for ensuring the success of the Virginia High School League Program.

Robert P. Nirschl, MD,
Chairman

Vanguard

In November, 1977, soon after his installation as President of The Medical Society of Virginia, Dr. Hagood saw the need for more definitive action on the part of the Society in regard to health legislation, particularly Public Law 93-641, the National Health Planning and Resources Development Act of 1974. He therefore appointed a Vanguard Committee to be responsible directly to the President of the Society and to concern itself with federal and state health legislation

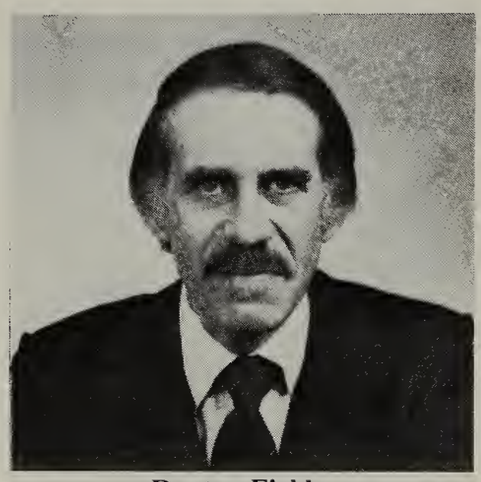
and regulations, most specifically in its initial work with Public Law 93-641. The Committee was appointed with a chairman and with two members from each of the five Health Service Areas in Virginia. The first meeting was held on December 16 and 17, 1977, in Richmond.

At that meeting, the Committee decided that four objectives were of primary importance. These objectives were: 1) to collect as much information as possible about the Health Systems Agencies in Virginia—their activities, the composition of their boards, and any other information regarding them; 2) to develop a level of awareness among physicians and the public regarding the implications of Public Law 93-641; 3) to try to work within the law as it now exists, ensuring that physicians and medical organizations would have opportunities to provide their expertise when Health Systems Agencies and the Virginia Statewide Health Coordinating Council made recommendations or rules; and 4) to develop a plan for recommending amendments to the law to make it more workable.

Because of impending hearings in the United States Congress on amendments to the legislation, a subcommittee of the Vanguard Committee was appointed and met in Fairfax in January, 1978. At that meeting, PL 93-641 was discussed at length and plans were laid for The Medical Society of Virginia to present its views to Congress regarding the proposed amendments. Subsequent to that meeting, Dr. Hagood testified before Congressman Paul Rogers' Subcommittee on Health. His testimony was one of the most impressive presentations heard, and had considerable impact on the deliberations of that group.

At its next meeting on January 21, 1978 in Richmond, the Vanguard Committee concluded that its responsibilities were so great that the Society would be well advised to provide funds for full-time staff support and consultant expertise in order to properly address these important issues and carry out its activities. The chairman made these recommendations to Council and they were approved.

Edward S. DeBolt and Company, Inc. Arlington, has been employed to assist the Vanguard Committee primarily in the area of public relations and member and public surveys. Medical Service Consultants, Inc., which is headed by Dr. George Contis and is located in Arlington, has been employed to provide analyses of the various health plans and implementation plans developed by the Health Systems Agencies and the State Health Planning and Development Agency. Both of these consultants have provided invaluable services to the Vanguard Committee and The Medical Society of Viriginia. Council also agreed to the employment of two fulltime staff members at the Society's offices to work on Vanguard Committee activities. After a careful search, the Society was fortunate in obtaining the services of Leonard J. Varmette, Jr., to serve as the executive secretary of the Vanguard Committee. Mr. Varmette joined the Society staff in mid-June, 1978.



Doctor Fields

Although the Vanguard Committee and The Medical Society of Virginia started their work quite late, some very significant results have been achieved in a somewhat short period of time. The Committee and the Society have provided and will continue to provide comment and input to the Health Systems Plans and Annual Implementation Plans of all Health Systems Agencies in Virginia. We have also established close contact with the State Health Planning and Development Agency and the Virginia Statewide Health Coordinating Council, and have provided continuous evaluation and input into the Preliminary State Health Plan. The Vanguard Committee is also holding regular meetings with the executive committee of the SHCC. We have made the health planners aware of our presence, our concerns, and our determination that the quality and availability of health care in Virginia shall not be sacrificed solely in the name of controls on costs.

Your Vanguard Committee recommends the following: 1) The Vanguard Committee should be continued as a committee of The Medical Society of Virginia and a change in the Society's bylaws should be considered to change its status to that of a permanent committee. 2) The members of The Medical Society of Virginia must be kept constantly aware of the activities of the Vanguard Committee and must accept the fact that its activities will require the financial support of all members of the Society. 3) The Vanguard Committee should not usurp the prerogatives of the Legislative Committee of The Medical Society of Virginia. The two Committees should exist separately and a definite delineation of their responsibilities should be spelled out. This is to emphasize the importance and the very fine work which has been done by the Legislative Committee over the past several years. 4) The real credit for the successes of the Vanguard Committee should go to our President who, in his wisdom, saw the need for such an activity at this time.

Richard L. Fields, MD,
Chairman

Minutes of Council

A meeting of the Council of The Medical Society of Virginia was held in Richmond at Society headquarters on Saturday, July 15, 1978.

Members Present: Dr. William J. Hagood, Jr.; Dr. Charles E. Davis, Jr.; Dr. W. Leonard Weyl; Dr. George M. Nipe; Dr. K. K. Wallace, Jr.; Dr. Harold L. Williams; Dr. Gervas S. Taylor, Jr.; Dr. Girard V. Thompson, Sr.; Dr. H. C. Alexander, III; Dr. Robert C. Green, Jr.; Dr. Harry C. Kuykendall; Dr. Robert V. Gailliot and Dr. C. Barrie Cook.

Others Present: Dr. George E. Broman, 2nd Vice President; Dr. William Stewart Burton, Dr. Frederick K. McCune, Dr. J. Latane Ware, Dr. Charles H. Crowder, Jr., Dr. James B. Jones and Dr. Gerald J. Fisher, Vice-Councilors; Dr. F. Ashton Carmines and Dr. John A. Martin, AMA Delegates; Dr. Raymond S. Brown, Dr. Percy Wootton and Dr. Arthur A. Kirk, Alternate AMA Delegates; Dr. William S. Hotchkiss, Member Board of Trustees of AMA; Dr. Daniel Mohler, representing Dr. Norman J. Knorr, Dean, University of Virginia School of Medicine; Dr. Fred Spencer, representing Dr. Jesse L. Steinfeld, Dean, Medical College of Virginia; Dr. Gerald H. Holman, Dean, Eastern Virginia Medical School; Dr. Leo Kirven, Jr., Commissioner, Department of Mental Health and Mental Retardation; Dr. Melvin Small, Chairman, Commission on Continuing Medical Education; Dr. James S. Kitterman, Immediate Past-President, Norfolk Academy of Medicine; Mrs. William N. Gordge, President, The Medical Society of Virginia Auxiliary; Mr. Robert G. Stuart, Executive Secretary, VaMPAC; Mr. Doug Finestone, President, MCV Student Medical Association; Mr. Allen Goolsby, Attorney for the Society; Mr. Edward S. DeBolt.

Presidential Progress Report.

Dr. Hagood brought Council up-to-date on Society activities since the May 13 meeting. Of particular interest were his comments concerning the Vanguard program and the enthusiastic response from physicians over the state. Dr. Hagood, Dr. Contis and Mr. DeBolt have presented special programs in a number of areas and local Vanguard Committees have been appointed as a direct result.

Council was quite interested in the President's report of a meeting between Society representatives and members of the executive committee of the State Health Coordinating Council (SHCC). The meeting had been arranged by SHCC for the purpose of exploring ways and means of establishing an effective working relationship between our two groups. The meeting covered such matters as the role and responsibilities of SHCC, responsibilities of regional HSAs, development of Health Systems plans and annual implementation plans, establishment of effective channels of communications, improvement of provider input at the sub-area council level, plight of the taxpayer, etc.

Dr. Hagood stressed the fact that this particular meeting was the first of many and that a second such session is already in the planning stages. He went on to state that Vanguard's potential is even greater than was originally thought and that its effect is already being seen. Inquiries have been received from various sources over the nation, and the Vanguard newsletter will, in the future, be sent to state medical societies, specialty groups, medical publications, etc.

The President, while attending the AMA meeting in St. Louis, addressed the Organization of State Medical Association Presidents and discussed the Vanguard program in some detail. His presentation aroused a great deal of interest.

Vanguard will also be the subject of a special program during the first session of the Society's House of Delegates in November—in addition to a large exhibit to be set up and manned just off the North Gallery. A special slide presentation—only recently completed by Ed DeBolt—will be available for showing at that time. The slide presentation can be obtained from September on by contacting the state office.

Dr. Hagood commented on recent meetings of the Insurance Committee and Mr. Moore followed with a brief explanation of the Committee's proposal to establish a centrally administered program somewhat similar to that of the Southern Medical Association. Details will be presented to Council in October.

Other matters covered by Dr. Hagood included a new Liaison Committee to PSRO, a request from

Medicaid for a review of problem cases involving practice patterns, over utilization, etc., possible by-law revisions, and the effective manner in which Medicaid has protected Virginia physicians from excessive and unwarranted federal investigations and harassment.

National Health Insurance

The AMA has requested each state medical society to make its thoughts known as soon as possible concerning national health insurance. AMA is anxious to have as much input as possible from the various states in order that a course of action can be developed which will have the strongest possible support across the nation.

It was the recommendation of the Executive Committee that a special committee be appointed to study the matter in detail and bring back its recommendations to Council on October 14. It was noted that time is a factor—particularly since the Society's House of Delegates will take final action only three weeks prior to the Interim Meeting of the AMA House. it was agreed that a committee should be appointed and Dr. Hagood announced that Dr. Alexander will serve as chairman. Working with him will be Dr. Caravati, Dr. Cook, Dr. Carmines, Dr. Puzak, Dr. Stark and Dr. Weyl.

Continuing Medical Education

Over the past several years the General Assembly has considered legislation which would relate continuing medical education to relicensure. The Medical Society of Virginia has always opposed the legislation.

Since such legislation apparently has the support of the State Board of Medicine, it has been suggested that representatives of both organizations seek to resolve their differences and perhaps agree on legislation which would be mutually acceptable. This raises a question as to whether the Society should engage in any discussion on the subject until and unless the House of Delegates reconsiders its current stand of opposition to mandatory CME for relicensure.

Dr. Small reported that the Commission on Continuing Medical Education was opposed to the mandatory approach until such time as its value becomes clearly evident. Thus far no valid study has provided proof that quality of care is improved through mandatory CME. A recent Michigan study would seem to bear this out.

Dr. Green discussed the background of the legislation under consideration by the General Assembly and stated that a committee of the Assembly had asked whether the Board and the Society would agree to a joint conference on the matter. Dr. Green recalled that representatives of both groups agreed at the time to hold such a joint meeting.

During the ensuing discussion, it was brought out that The Medical Society of Virginia is clearly opposed to further government intrusion into continuing education. Council was reminded that it has been only a year since continuing medical education was made a requirement for continued membership in the Society and that it is doubtful that the House wishes to extend its action so soon. The feeling was also expressed that proven mechanisms for providing CME must first be established before further thought is given to the mandatory approach.

Dr. Nipe then expressed the opinion that the matter should properly be considered by the House of Delegates and moved that it be brought to the attention of the House in November.

Dr. Wallace moved to amend by incorporating into the motion a statement that the Board of Medicine should be advised of the Society's opposition to mandatory CME under government direction and also of the decision to bring the matter before the House in November. The motion would also suggest that the Board consider withdrawing its bill before the General Assembly should the House of Delegates reaffirm its opposition.

Mr. Goolsby suggested that perhaps the Board could be granted the power to require continuing medical education for those physicians considered to be in need of such action. At this point a question was raised as to why Council should even consider bringing the matter back before the House and Dr. Nipe formally withdrew his motion.

Dr. Weyl then moved that the position of the Society be restated as follows:

a) It supports the relating of CME to membership.
b) It favors voluntary continuing medical education for all Virginia physicians.
c) It remains opposed to mandatory CME for purposes of relicensure.

The motion was seconded and carried.

Dr. Small then reported on other CME developments and expressed the feeling of his Commission that a letter over the signature of the President should be included with the packet of material sent those members receiving the Physician's Recognition Award. The letter would confirm the Society's commitment to continuing medical education and serve as a source of encouragement to the recipient. It was agreed that such a letter should be prepared just as soon as possible.

Second Opinion.

The Department of Health, Education and Welfare has invited The Medical Society of Virginia to participate in a second opinion program soon to be imple-

mented. It had requested the Society to consider serving as a "list developer"—compiling and updating a list of physicians who agree to provide second opinions. The Society was also invited to serve as the list holder and refer callers to physicians on that list.

It was brought out that the AMA House of Delegates had given a great deal of consideration to the subject in St. Louis and reaffirmed the right of a patient or physician to seek consultation freely with any consultant of his or her choice. The House also opposed the concept of mandatory consultations when required by a third-party payor. It did, however, support the concept that when consultation is required by a third-party payor, there should be no cost to the patient. The House also opposed the concept of closed panels of consultants. It went on to state that should consultation be required by a third-party payor, the patient should have free choice of physician.

It was the consensus that HEW should be advised by letter that The Medical Society of Virginia supports the AMA position. A motion to that effect by Dr. Gailliot was seconded and carried. It was also agreed that copies should be sent all component societies.

Telephone Directory Listings.

Council, during its meeting on May 13, was advised that telephone company officials had rejected a request that disclaimers be published in telephone directories as to any input or involvement by medical societies where specialty listings are concerned. Considerable dissatisfaction was expressed over the company's response and Council directed that assistance be sought from the State Corporation Commission.

Mr. Osburn reported that the Corporation Commission had been contacted and had given assurance that it would take the matter up with telephone authorities. He went on to say that a representative of the telephone company had recently called to express the opinion that physicians generally would suffer in the eyes of the public should a disclaimer be published. Dr. Cook then moved that the Executive Committee formulate a disclaimer and submit it to the telephone company for its consideration and, hopefully, its use. The motion was seconded and adopted.

Intermittent Positive Pressure Breathing.

Blue Cross-Blue Shield of Virginia has requested The Medical Society of Virginia to consider the need for intermittent positive pressure breathing therapy. Apparently some physicians are contending that the procedure is of doubtful value and should be eliminated as a covered service.

Although a question was raised at to whether the Society should take any positive action, it was agreed that the establishment of a statewide standard could be very important and that the Society would quite likely be providing a real service to Virginians.

The Executive Committee had given prior consideration to the matter and recommended that a special committee be set up to study the situation in detail and report back to Council in October. It called attention to the fact that there exists a number of other modalities and that the overall situation should be studied carefully. The motion was seconded and carried.

Dr. Hagood stated that the Committee would be headed by Dr. Quincy Ayscue and that other members would be Dr. Regis Kohring, Dr. Read McGehee, Dr. Gil Abenes, and Dr. Albert Lichtmann.

Jail Project.

Although The Medical Society of Virginia was offered an opportunity to participate in the AMA program to improve medical care and health services in jails, it became apparent, after some study, that the Society had neither the staff nor resources to attempt such an undertaking at this time.

Mr. Osburn stated that staff members have gone so far as to meet with representatives of the State Department of Health and are of the opinion that a joint program should be carried out in Virginia. It was learned that AMA has assured the Society that it would cooperate by providing all the data it has collected over the past several years.

Dr. Edmund Brown, Deputy Commissioner of Health, stated that no standardized program exists in Virginia. He added that the Department of Corrections is currently seeking assistance in surveying the various jails over the state in the hope that some meaningful standards for guidance and compliance might be established.

There followed considerable discussion during which it was brought out that such programs can be costly in terms of both time and money and that a very careful study should be undertaken before a final decision is made.

It was the recommendation of the Executive Committee that a special committee be appointed to study the advisability and feasibility of setting up such a program. Dr. Weyl moved that such a committee be appointed and requested to report its findings to Council just as soon as possible. The motion was seconded and carried.

Dr. Hagood announced that the Committee would be composed of Dr. Robert Gailliot, Chairman; Dr. Girard Thompson and Dr. Harold Nemuth.

VaMPAC.

Dr. Weyl reported that VaMPAC had received a leadership award from AMPAC during the recent AMA meeting in St. Louis. Although this is a step in the right direction, VaMPAC membership is considerably below what it should be. Dr. Weyl expressed the hope that every member of Council will join at the earliest possible moment and that "99+" lapel pins will be prominently displayed at the next Council meeting.

Committee on Aging.

Dr. Hagood reminded Council that a Committee on Aging will soon be appointed and that he is awaiting their nominees. It is hoped that the Committee can be appointed within the next two weeks.

Auxiliary.

Council was pleased to learn from Mrs. Gordge of the Auxiliary's many worthwhile activities. It is particularly gratifying to learn of the Auxiliary's interest and concern over the HSA problem and the wonderful job it is doing in providing information about the Vanguard program.

Membership Records and Services.

The Society has, for the past eight years, purchased computer time for its membership records operation. Currently the Society is one of eight states being serviced under the AMA AMCAP program. This is, of course, a Chicago-based operation and its drawbacks have become quite numerous. If the Society is to do the job expected of it, it must either set up its own computer operation within the headquarters building or utilize the services of a Richmond-based computer firm.

Mr. Moore reported on his efforts to find the proper solution to the problem and offered several alternatives for Council's consideration. He stated that one of the outstanding computer companies in the nation was located in Richmond and has worked very closely with him in designing a program for the Society. Of the three alternatives discussed, it was the consensus that the Society should either lease or purchase the necessary equipment and operate its own in-house system. Total cost for leasing over a five-year period would amount to approximately $77,000 while an outright purchase of equipment would result in a savings of approximately $25,000. Regardless of which route might be chosen, there would be an initial programming cost of some $13,000. It was explained that the initial programming operation is perhaps the most important part of the entire program since it sets the stage and provides the foundation for everything that follows. *Cont'd page 726*

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

. . . in functional G.I. disorders*

Bentyl®

(dicyclomine hydrochloride USP)

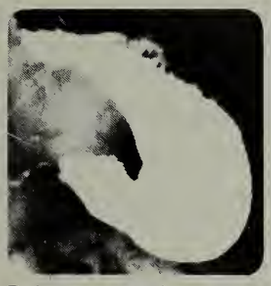
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

8-3497 (Y515A)

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection
AVAILABLE ONLY ON PRESCRIPTION.

Brief Summary
INDICATIONS
For use as adjunctive therapy in the treatment of peptic ulcer.
IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS/ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC/ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION.

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders); and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIONS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: autonomic neuropathy; hepatic or renal disease; ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon; hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension; hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.
It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DOSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.
Usual Dosage: Bentyl 10 mg. capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults:* 1 tablet three or four times daily. Bentyl Injection: *Adults:* 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.
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Continued from page 722

The Executive Committee had given a great deal of thought to the matter and agreed that a decision should and must be made as soon as possible. It recommended, therefore, that the Executive Vice President be authorized to purchase or lease the required equipment after first consulting with Society auditors. Such consultation would be for the purpose of determining the best course of action from an investment standpoint. Dr. Kuykendall moved that the Committee's recommendation be approved and his motion was seconded and carried.

Cost Control Placard.

Dr. Hagood displayed one of the cost control placards which will serve as the centerfold of the July VIRGINIA MEDICAL. The placard can be detached from the publication and assembled into a most attractive desk or table counter card. It calls the patient's attention to his physician's concern with the cost of medical care and the fact that everyone must work together to find an effective solution to the problem. Dr. Hagood complimented Mrs. Gray and Mr. DeBolt on making the placard possible. Everyone agreed that it was most attractive and should serve a most useful purpose.

Annual Meeting Program.

Although it has become somewhat traditional for the Sunday morning general session of each Annual Meeting to concern itself with matters of a socio-economic nature, a great deal of concern has been expressed over the the somewhat small attendance. Consequently, Council was asked to determine whether the Sunday morning sessions should be continued.

During the discussion which followed, it became quite evident that everyone was disappointed with the Sunday morning attendance and shared the opinion that it should be eliminated. A motion by Dr. Gailliot to this effect was seconded and carried.

Membership.

Dr. Alexander advised Council that his Membership Committee had met earlier in the day and was quite pleased and encouraged with what was being accomplished. Society growth statistics are considerably ahead of last year and AMA membership is running far ahead. Dr. Alexander noted, however, that personal contacts remain the most effective form of recruitment and urged all members of Council to participate in the overall effort. Mention was made of the fact that the Society has never been as active as it is now and that programs such as Vanguard are great recruitment aids.

AMA.

Dr. Carmines reported the highlights of the recent meeting of the AMA House of Delegates in St. Louis. It was an unbelievably busy session with over 300 separate items of business. Dr. Carmines stated that the most important matters considered had to do with the recommendations of the National Commission on Cost of Medical Care, Principles of Medical Ethics and National Health Insurance. He urged that everyone read the proceedings as published in *American Medical News*. Dr. Carmines also called attention to the inaugural address of Dr. Nesbitt and his plea for voluntary restraint of medical fees.

Dr. Hotchkiss, now a member of the AMA Board of Trustees, commented on the national health insurance issue and expressed some concern over the time factor, which will delay input from The Medical Society of Virginia. It is unfortunate that the Society's House of Delegates and the AMA House meet so close together.

Virginia's AMA delegation was described as being much more active and influential than at any time in the past. Attention was also called to the fact that some delegates representing specialty groups reside in Northern Virginia and should be invited to become courtesy members should such be possible under the by-laws. Hope was expressed that every member of Council will make an effort to attend at least one AMA meeting in the not too distant future.

Telephone Rates.

The Medical Society of Virginia, as a member of the Virginia Association of Professions, has been requested to support a protest being filed with the State Corporation Commission in opposition to an effort by the C&P Telephone Company to implement "measured service" rates for all business subscribers. It was stated that the new proposal would skyrocket the cost of telephone service for all business organizations—including the Society.

Mr. Osburn reported that the Virginia Retail Merchants Association is spearheading the campaign of opposition and that legal counsel has been retained to represent concerned parties before the State Corporation Commission. He stated that several large industrial corporations have made sizable contributions in support of the effort—some as much as $5,000.

It was then moved by Dr. Weyl that the Society join with other members of the Virginia Association of Professions in protesting the C&P proposal and that financial support be authorized in an amount not to exceed $1,000. The amount of contribution would

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Matthew Weinstein, Administrator

be left to the Executive Vice President. The motion was seconded and carried.

Health Care Cost.

Mr. Goolsby brought Council up-to-date on recent activities of the Health Care Cost Study Commission. It was brought out that Senator Buchanan is a member and that Dr. Kenley and Dr. Kirven serve as ex-officio members.

It was learned that a public hearing will be held on September 6 and that Society representatives, including Dr. Hagood, will testify.

Council was advised that the Commission will touch many bases during the course of its study. It is quite likely that Blue Cross-Blue Shield will be explored in some depth, as will the HMO movement. The fixing of hospital rates will probably also be considered along with the question of whether the State should consider mandating what types of coverage should be written by specific carriers.

There being no further business, the meeting was adjourned.

Robert I. Howard, Secretary

APPROVED:
William J. Hagood, Jr., M.D., President

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VIRGINIA AUTHORS

Unusual Cutaneous Manifestations of Sarcoidosis. KENNETH E. GREER, MD, LOUIS E. HARMAN, JR., MD, and ALLAN L. KAYNE, MD, *Charlottesville.*

The diagnosis of sarcoidosis is best established when there is evidence of granulomatous involvement in two or more organs. Three patients with unusual cutaneous manifestations of sarcoidosis, including palmar and follicular lesions, nonscarring alopecia, and widespread plaque or erythrodermic sarcoidosis, are reported. In all three patients the skin biopsy was important in establishing the diagnosis. South Med J 70:666, 1977.

Fatal Myocarditis Associated with Acute Tonsilitis. BRUCE L. BENDER, MD, and GORDON E. MADGE, MD, *Richmond.*

A case of myocarditis, hepatic necrosis, and acute anuria associated with acute tonsilitis was described. The previously reported relation between myocarditis and tonsilitis not of diphtheric or β-hemolytic streptococcal origins was discussed, as well as the implications for management. South Med J 70:1005, 1977.

Salvage of Bovine Graft Arteriovenous Fistula for Hemodialysis. SIBU P. SAHA, MD, and JORGE ROMAN, MD, *Salem.*

This report describes three patients with complications of bovine graft implanted for chronic dialysis. The three complications were surgically corrected so that each graft could be used again for hemodialysis access. South Med J 70:1439, 1977.

Immune Complex Disease Associated with an Infected Ventriculojugular Shunt: a Curable Form of Glomerulonephritis. BETTY P-Y. YEH, MD, HAROLD P. YOUNG, MD, PETER F. SCHATZKI, MD, and EDWARD S. BAER, MD, *Richmond.*

A 22-year-old man with a ventriculojugular shunt had edema, hematuria, proteinuria, hypocomplementemia, azotemia, and *S Epidermidis* bacteremia. Initial percutaneous renal biopsy showed a diffuse proliferative glomerulonephritis. Subendothelial and intramembraneous deposits were seen on electron microscopy. Immunoflourescent studies were positive for IgG and C3. A repeat percutaneous renal biopsy six weeks after cessation of antibiotic therapy revealed a mild proliferative glomerulonephritis with some evidence of resolution. No deposits were seen on electron microscopy and immunoflourescent studies were negative. At elective shunt revision three months after cessation of therapy, culture of the jugular portion of the removed shunt revealed *S epidermidis.* Early recognition of immune complex glomerulonephritis occurring with an infected ventriculovascular shunt should permit early treatment (antibiotic therapy and removal of the infected foreign body) and a favorable outcome. South Med J 70: 1141, 1977

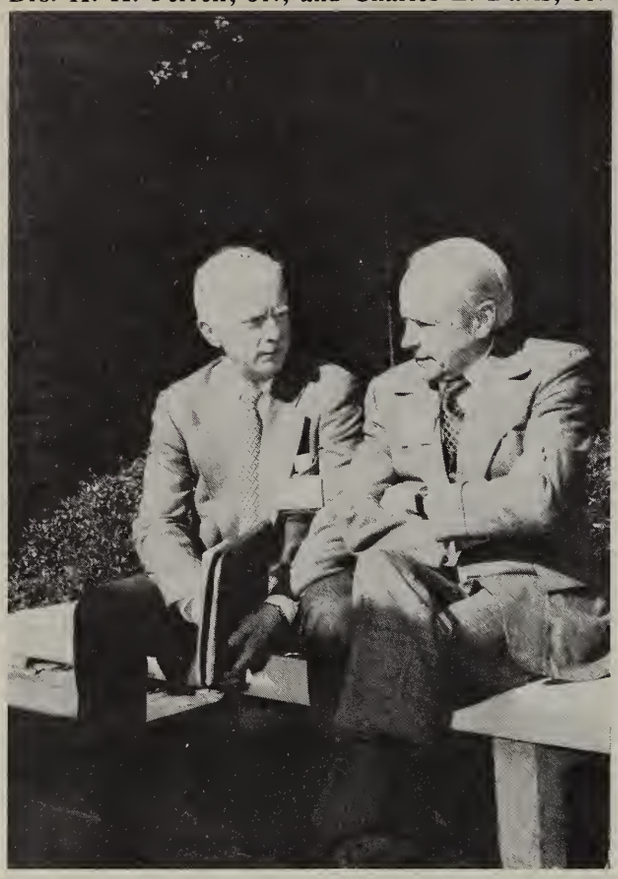
Non-Union of the Femoral Neck and Avascular Necrosis of the Femoral Head: Treatment with Bone Grafts. RICHARD L. GAERTNER, MD, and WILLIAM MINOR DEYERLE, MD, *Richmond.*

The use of full-thickness iliac bone grafts shaped into cigar and cigarette forms in the treatment of nonunion of the femoral neck and idiopathic avascular necrosis of the femoral head was studied. Results of 36 operations (18 hips in each category) were classified according to pain, range of motion, function, and roentgenographic appearance. Follow-up with a two-year minimum revealed that bone grafting contributed to a successful result in the nonunion group with 17 hips uniting. Thirteen hips with avascular necrosis, however, showed progression of disease and were classified as failures. In light of these results, bone grafting in the treatment of idiopathic avascular necrosis must be questioned. South Med J 70:1039, 1977.

Immunofluorescent Staining Technics in the Diagnosis of Alopecia. EDWARD ABELL, MB, BS, *Richmond.*

A retrospective clinicopathologic and immunopathologic review of 50 cases of scalp alopecia was done to assess the diagnostic value of the immunofluorescent staining technic. Discoid lupus erythematosus and lichen planus almost always produce different patterns of immunoglobulin and complement deposition. However, in occasional cases of discoid lupus erythematosus the characteristic LE immunofluorescent band may be absent and the direct immunofluorescent findings may be indistinguishable from those seen in lichen planus. Negative results were found in all other conditions except four cases of benign mucous membrane or cicatricial pemphigoid presenting with scalp lesions. Three of these cases were clinically unsuspected. South Med J 70:1407, 1977.

Drs. H. H. Ferrell, Jr., and Charles E. Davis, Jr.



Drs. Charles McD. Graham, Jr., and William P. Tice



At the Annual Meeting
Williamsburg, 1976



Drs. Benjamin H. Inloes, Jr., and David L. Sarrett



Drs. George M. Nipe and W. Leonard Weyl

VIRGINIA MEDICAL EDITORIAL

A New Diuretic?

Author's Note: These paragraphs are intended as an expression of timely humor. Perhaps many of us need to smile more these days. Excepting the noted references, all facts have been discovered by the author. Similarities to known substances may be desired but are hardly believable.

IN A REACTION of highly flammable gaseous hydrogen and unstable oxygen known to be noxious in its pure state, a clear, odorless and tasteless fluid is formed. A quantitative analysis of the substance shows that it consists of two elements of hydrogen and one of oxygen. Thus, the name suggested for this fluid compound is hydrogen oxide or, more accurately, hydrogen monoxide.

Hydrogen monoxide appears to be a highly reactive substance with unusual properties that distinguish it strikingly from most other liquids. It has a relatively high freezing point, boiling point, heat of vaporization and surface tension.[1] Its polarity and hydrogen-bonding properties make it a potent solvent for many ionic compounds and neutral molecules. The substance also disperses amphipathic molecules, such as soaps, to form micelles. The compound ionizes only slightly to form hydronium and hydroxide ions and conducts electricity poorly.

The solvent properties of hydrogen monoxide are better than most common liquids. Many crystalline salts and other ionic compounds readily dissolve in the fluid but are nearly insoluble in nonpolar liquids such as choloroform or benzene. In addition to dissolving many ionic compounds, the fluid readily dissolves non-ionic but polar compounds such as sugars, simple alcohols, aldehydes and kepones. The presence of dissolved solutes, however, causes the structure and properties of hydrogen monoxide to change. Dissolved salts tend to "break" the normal structure of the liquid substance.

Hydrogen monoxide seems to be an excellent diuretic. Normally, the volume of urine is largely determined by the concentration and type of solutes delivered to the renal tubule. Therefore, water and various electrolytes and non-electrolytes can act as diuretic agents when given in excess. Hydrogen monoxide, in this respect, appears to be as effective as water in its diuretic action. After administration, the substance distributes itself through all fluid media of the body. Diuresis occurs by decreased tubular reabsorption.[2] Blood concentration and blood pressures are little affected by the amounts of liquid, which leads to considerable diuresis. The compound cannot be recommended for edematous individuals since it would appear to promote the formation of edema fluid.

There may be toxic effects from overadministration of the liquid to normal individuals. If the fluid substance is absorbed more rapidly than it is excreted, it may result in excessive hydration of body cells.[2] Red blood corpuscles will hemolyze and cells of organized tissues will appear to become turgid, resulting in muscle tremors, cerebral edema and convulsions. Such toxicity would appear to be of exceedingly rare occurrence since overdose of hydrogen monoxide orally in normal individuals would be difficult. The average dosage per day for a person in fair to good health is 1500 ml per sq meter of skin surface. For an average adult of 70 kg, this is about 2.6 liters. Consuming an additional liter or more per day may appear to be an unlikely event.

Should, one day, hydrogen monoxide be considered in official circles as a new diuretic, the question of government approval would have to be approached. Considering all aspects of the problem, including the rather significant toxicity of hydrogen

monoxide, an application to relevant authorities for permission to use the compound as a diuretic cannot be recommended.

GEORGE MOORE, MD

Box 227, Antipoison Neck
White Stone, VA 22578

References

1. Lehninger AL: Biochemistry (2nd Edition), Johns Hopkins University. New York, Worth Publishers, 1977, pp 39-53
2. Goodman LS, Gilman AG: The Pharmacological Basis of Therapeutics (5th Edition). New York, McMillan Publishing Company, 1975, Chapters 39, 40

Drugs and Gresham's Law

SIR Thomas Gresham, the distinguished English financier of the middle sixteenth century, announced a principle regarding the wealth of nations that appears to maintain its validity with unwavering fidelity. Stating his principle simply, it is: Bad money, such as fiat currency, will drive good money off the market. Gresham applied his principle to money only, but through the years the author has observed that Gresham's law applies and operates in many areas of human endeavor.

In a person whose speech becomes contaminated with many vulgar expressions, poor diction will eventually drive good diction to the wall. When the literature of a nation is contaminated by inferior writing, ultimately the classic literature succumbs and is replaced by inferior writing; this is shown by the small number of subscriptions to the intellectual magazines compared with the great increase in population.

The principle operates not only on our diction and in literature but on society itself. When people of poor cultural and moral standards move into any community, the cultured people with high moral standards will be gradually driven from the community. It appears that in many areas of our lives greed, ambition, crudeness and immorality will drive away the virtues of truth, beauty, goodness and love.

When one applies Gresham's law to the rise and fall of drugs through the ever-lengthening past, he finds that drugs have stood in bold defiance of its principle. Let us examine the record.

The great discoveries of ether and chloroform as general anesthetics were the chosen agents for nearly a century. Then the intravenous thiobarbiturate thiopental gradually replaced nitrous oxide as an induction agent. Later cyclopropane was used to replace ether and chloroform in the third decade of the present century. Chloroform was rapidly diminishing in use owing to its high mortality rate. At the mid-century ether and cyclopropane were anesthetics of choice. Then the fluorine revolution occurred, taking the catastrophic fire hazard out of the operating room. It appears that in bold defiance of Gresham's law superior anesthetics have driven those that were inferior, and hence more dangerous, to the wall.

Consider also the anti-infective drugs. Paul Ehrlich's discovery of arsphenamine as a cure for syphilis shortly after the turn of the century was a bold and giant step forward in medical science. But it was not without its disconcerting side effects. Mapharsen, another arsenical, was an improvement, and soon arsphensamine was discarded. When World War II brought forth Alexander Fleming's discovery of the broad-spectrum, comparatively harmless antibiotic penicillin, the arsenicals were discarded and again the better drove the less effective to the wall in defiance of Gresham's law.

The good replacing the not so good is also markedly illustrated in the nonaddictive analgesics. In the last quarter of the past century, the German chemical industry dominated the world in its capacity to synthesize new dyes and drugs. One of the first of the nonaddictive analgesics was acetanilid. Later it was found to produce met and sulfhemoglobin. Then came phenacetin, which was effectively and extensively used until about a decade ago, when it was shown to evoke kidney damage upon repeated use. Also the effective analgesic aminopyrine was shown to produce blood dyscrasias in a limited group of patients. The original molecule of acetanilid was modified to produce acetaminophen, and acetaminophen has been recently shown to produce kidney damage upon single heavy overdose.

While this make, take and reject program was extant through the three-quarters of this century, the nonaddictive analgesic aspirin was being used more and more extensively. In defiance of Gresham's law, aspirin has risen to become the number one nonaddictive analgesic. The reason is quite clear; if the pain involves an inflammatory process, such as the arthritides, myalgia, neuralgia or tendonitis, aspirin is the drug of choice since it is effective in these conditions, and the other analgesics, with the exception of aminopyrine, are not. Also, there are few people (less than 1%) who experience gastric intolerance to aspirin. This can be minimized by effective buffering and taking with much water. The extent of use of aspirin in the United States, approximately 20 tons daily, is testimony to its value as an analgesic and its defiance of Gresham's law.

JOHN C. KRANTZ, JR., PHD

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VIRGINIA MEDICAL OBITUARY

Ernesto Ibanez, MD

Dr. Ernesto Ibanez, Amelia Court House, died unexpectedly on July 29 in Lima, Peru. He was 51 years old. A native of Peru, he was visiting his family there when he suffered a heart attack and died in the intensive care unit of a private clinic.

Dr. Ibanez was educated in medicine at San Marcos University, Lima, and came to the United States in 1957, serving his internship and residency in internal medicine in Baltimore. At the Medical College of Virginia he added a residency in radiology and, after specialized training at the University of Pittsburgh, practiced as a radiologist at veterans hospitals in Tennessee and Maryland. In 1971, following a year's fellowship at Albert Einstein Hospital, New York, he began practicing in Amelia, where he also was the county medical examiner and worked with the county health department.

R. D. Campbell, MD

Dr. Ross D. Campbell, Saltville, died July 21 in Abingdon Hospital, Marion, Virginia, at the age of 82. Dr. Campbell was a graduate of the Medical College of Virginia and had practiced medicine in Saltville since 1926, specializing in cardiovascular diseases. He was a veteran of World War I, had served on the Saltville Town Council for a number of years, and had been chief of staff of T. K. McKee Hospital. His memberships included the Smyth County Medical Society and The Medical Society of Virginia, the latter affiliation of more than 50 years duration.

Frank D. Daniel, MD

Dr. Frank Dunnington Daniel, former president of the Virginia Academy of Family Physicians, died July 26 at his home in Charlottesville. He was 70 years old. Dr. Daniel was a graduate of Davidson College and of the University of Virginia School of Medicine. He had recently retired from practice.

Conrado T. Mata, MD

Dr. Conrado T. Mata, Salem, died April 12 at the age of 68. A general practitioner, Dr. Mata was a graduate of the Faculty of Medicine and Surgery at the University of Santa Tomas, Manila, the Philippines.

William B. Huff, MD

Dr. William Banks Huff, general surgeon in Roanoke, died July 22 at the age of 81. Dr. Huff was a graduate of the University of Maryland School of Medicine. He had belonged to The Medical Society of Virginia 50 years and was a member also of the American Society of Abdominal Surgeons.

Memoir of T. N. Barnett 1891-1978

By Ernest P. Buxton, Jr., MD, James O. Burke, MD, and Frank M. Blanton, MD

Dr. Thomas Neill Barnett was born December 17, 1891, at Berryville, Virginia. He graduated from the Medical College of Virginia in 1915. After internship at St. Luke's Hospital in Richmond, where he met Gladys Reamey, his future wife, he took postgraduate training at Massachusetts General Hospital and Harvard Medical School. Here he became interested in gastroenterology. He returned to Richmond and pursued this specialty for nearly 50 years until his retirement in 1965.

He took great personal interest in his patients, as well as professional concern, and it is not surprising that he built up a large and loyal clientele. He had a great sense of humor, which helped on occasion to placate patients kept waiting overly long to see him. He once remarked, "I'd just as soon have a man pull a *gun* on me as a *watch*!".

Dr. Barnett was a member of American Medical Association, Medical Society of Virginia, Tri-State Medical Society, Southern Medical Society, the Richmond Academy of Medicine, and the National Gastroenterological Association. He was the founder of the Gastrointestinal Clinic at the Medical College of Virginia, and did much of the fluoroscopy himself. He attained the rank of associate clinical professor of medicine. He was a vestryman at All Saints Episcopal Church, a member of the Commonwealth Club and the Caduceus Club. Much of his time after retirement was spent at his country place in Irvington, Virginia. His wife predeceased him by a few weeks.

It is with sorrow that we record his death on June 27, 1978.

Prepared and published at the request of the Richmond Academy of Medicine.

WHO'S WHO IN VIRGINIA MEDICINE

One of the top prizes at the 1978 annual show of the Richmond Rose Society was won by Dr. **William Jackson Frable,** *Richmond,* who took the Garner Memorial Perpetual Trophy for the best collection of three hybrid tea roses of the same variety in different stages of opening. Dr. Frable is acting chairman of the Medical College of Virginia's Division of Surgical Pathology and president-elect of the American Society of Cytology.

He and his wife, Dr. **Mary Ann Frable,** of the MCV department of otolaryngology, nurture 137 hybrid tea and floribunda bushes on the grounds of their home in Windsor Farms, not far from MSV headquarters. The photograph on this page shows them there. Visitors are particularly enchanted with the "Scotch garden", a section of rose bushes imported from Scotland and strangers to the American rose family. In the Frable home there's a big collection of silver trophies won in rose competitions during the past 12 years. "We're running out of space," laments Mrs. Frable—but that doesn't deter her husband, who is out among the bushes every day in season, cultivating more prizewinners. Bouquets of roses abound in their home for six months of the year, from the first blooms that arrive at the end of May to the last that beautify the Thanksgiving dinner table.

The Frables "inherited" a rose bed of 50 bushes from previous owners of their home. They found them so satisfying to cultivate that they converted all the other flower beds to roses. Now, on the Frable premises, just about everything's coming up roses.

A medical article by Dr. Mary Ann Frable appears in this issue.

Senatorial candidates John Warner and Andrew Miller were to woo the votes of doctors' wives at a meeting September 21 of the Auxiliary to the Richmond Academy of Medicine. Members of the Academy were invited to join the morning gathering, which was set for the home of the Drs. **Jane and Percy Wootton.** On the schedule was coffee at 10 am, a half hour for each candidate's message, and a question and answer period. Mrs. Edward D. Martirosian, the Auxiliary's program chairman, planned the meeting, and Mrs. Robert Y. Fidler, president, introduced Warner and Miller.

Gio Batta Gori, MD, the man who found himself rocketed from the quiet obscurity of his National Cancer Institute laboraory in a blaze of national press coverage recently, will be a speaker in the scientific program of the Annual Meeting in Williamsburg on Saturday, November 4. A study by Dr. Gori named several cigaret brands far lower in toxic tars and nicotine than others and suggested they might be smoked with "tolerable" effects on the health of the smoker; as a result of the report, Dr. Gori invoked the wrath of almost every health official in Washington. "Our data has been misinterpreted," Dr. Gori was quoted as saying subsequent to the uproar. "I am not advocating that people should smoke. The only totally safe cigaret is the cigaret that is not lit." See your program at the centerfold for details of Dr. Gori's presentation.

Dean T. Mason, MD, Chief, Cardiovascular Section, University of California School of Medicine at Davis, will be the McGuire Lecturer at the 50th anniversary of this MCV/VCU series October 27 and 28. The subject this year is "Cardiology in Primary Care", and Baruch auditorium of the Egyptian Building will be the setting.



The Doctors Frable among prizewinners. *Photograph by Joe Colognori.*

WHO'S WHO IN VIRGINIA MEDICINE

Dr. **Sam D. Graham,** *Staunton,* is the new president-elect of the American Urological Association, to take office as president in May, 1979.

Dr. Graham's curriculum vitae is distinguished not only by accomplishments in medicine but by leading contributions to his community. He is a former mayor of Staunton and president of that city's Kiwanis Club, and his work with the handicapped has been recognized by both a Presidential Citation and the Roy M. Hoover Award. A graduate of the University of Virginia School of Medicine, where he also served his urological residency, Dr. Graham has been president of the medical staff of King's Daughters' Hospital, Staunton. In addition to the Association he will head, he belongs to the Augusta County Medical Society, The Medical Society of Virginia, the Southern Society of Urological Surgeons, and the American Association of Clinical Urologists.

Dr. **Eleanor F. Evans,** member of the faculty of the Medical College of Virginia, *Richmond,* has been elected the first president of the recently incorporated Virginia chapter of the National Foundation for Infectious Diseases.

The Virginia Allergy Society has new officers. They are Dr. **Peyton A. Eggleston,** *Charlottesville,* president; Dr. **Kenneth W. Berger,** *Falls Church,* vice president; and Dr. **David C. Walton,** *Roanoke,* secretary-treasurer.

New officers of the Virginia Obstetrical and Gynecological Society are Dr. **A. Randolph Garnett,** *Norfolk,* president; Dr. **Lucien W. Roberts, Jr.,** *South Boston,* president elect; Dr. **John Q. Hatten,** *Newport News,* vice president; and Dr. **David W. Branch,** *Roanoke,* secretary-treasurer.

VIRGINIA MEDICAL is to publish in its November issue a listing of current officers of all Virginia specialty societies.

Gov. John N. Dalton has appointed Dr. **W. Leonard Weyl,** MD, *Arlington,* to the State Board of Health. Dr. Weyl was President of the Medical Society of Virginia 1976-1977.

Newly elected chairman of the professional advisory board of the Epilepsy Foundation of America is Dr. **Fritz E. Dreifuss,** *Charlottesville,* director of the University of Virginia's Comprehensive Epilepsy Program.

At the Medical College of Virginia Dr. **Reuben B. Young** has been named interim executive director of MCV Hospitals.

New chairman of the otolaryngology department at the Medical College of Virginia is Dr. **George H. Williams,** *Richmond.*

The American Board of Family Practice has named these MSV members as diplomates: Dr. **Rodrigo T. Isada,** *Saltville;* Drs. **Leon Junius Brown, Jr., Charles E. Cummings, Marvin T. Williams,** and **Ronald Wayne Toney,** all *Richmond;* and Dr. **Daniel Ralph Jones,** *Vinton.*

New fellows of the American College of Physicians are Drs. **William P. Edmondson, Jr.,** and **Thomas D. Elder,** *Norfolk,* and Dr. **Joseph B. Hollis,** *Chesapeake.*

Dr. **John D. Johnston,** *Martinsville,* has been certified by the American Board of Urology.

The Virginia Academy of Science has elected Dr. **Arthur W. Burke, Jr.,** *Richmond,* to fellowship.

New president-elect of the Roanoke Academy of Medicine is Dr. **David P. Minichan, Jr.,** who is to take office in October 1979. Dr. **Charles L. Crockett, Jr.,** current president-elect, is to take office this October, succeeding Dr. **Edwin L. Williams II.**

At Eastern Virginia Medical School, Dr **John N. King** has been named assistant dean, continuing medical education; Dr. **James P. Baker** is the new chairman of the department of internal medicine, and Dr. **Robert J. Faulconer** has been appointed chairman of the department of pathology.

In *Pearisburg*, fellow physicians, hospital staff, and the mayor himself gathered to celebrate Dr. **Douglas F. Love**'s 50 years of medical practice. It was a gala evening, with speaker after speaker expressing praise and gratitude, and presents of a watch and desk set (from the Giles Memorial Hospital) and the key to Pearisburg (from Mayor Clarence Taylor, who said it was only the fourth he's given in more than 30 years as mayor). Dr. Love was amazed at all the attention and said, according to a story in the Pearisburg *Virginian-Leader,* "It's just too much. What am I going to do after this?" He allowed as how he'd trade in the 50-Year Club pin recently given him by The Medical Society of Virginia for another 25 years of practice.

Dr. Love was born in Sydnorsville, Virginia, and earned his medical degree at the Medical College of Virginia. He began his practice in Market, Virginia, then went to the coal fields of Buchanan County and West Virginia. In 1947 he began practicing in Giles County. A son, Mike, was recently graduated from the Medical College of Virginia and is on his way, his father hopes, to a 50-year celebration.

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From the President: Antitrust Threatens

ALTHOUGH federal antitrust laws have been on the books for more than 60 years, it is only recently that the Federal Trade Commission and the courts have started to apply them to professionals and professional associations. In its 1975 Goldfarb decision, the Supreme Court ruled that since a professional's activity is a service exchanged for money and that the service forms a significant portion of the gross national product, the economic aspects of this activity, i.e., physicians' fees, are subject to antitrust rules and regulations. Meanwhile, because of the growing concern about rising health care costs, Congress, through committees such as the Commerce Department's Oversight and Investigations Subcommittee, has targeted in on the physician-dominated Blue Shield Plans. One of the reasons for the scrutiny is the tremendous amount of money these Plans pay to physicians.

The assistant director of the Federal Trade Commission's Bureau of Competition, Mr. Jonathan Gaines, was one of the first witnesses to be heard by the Oversight Subcommittee. Mr. Gaines also recently addressed the Professional Associations Council of the American Society of Association Executives, and I believe some of the remarks he made, although he was not representing the Commission's official position, provide us with a very clear picture of the direction the antitrust enforcers are taking. They also illustrate the hard decisions physicians must make regarding our traditional activities in professional self-regulation.

Among Mr. Gaines' observations are:

- that any form of price fixing among medical or professionals is just as illegal as in other businesses.
- that "relative value scales", or RVS's (and possibly also "usual, customary, and reasonable" formulas, or UCR's), may exceed the limits of appropriate self-regulation. The FTC has ruled it is unlawful for medical societies to prepare RVS's.
- that the FTC has challenged the restraints on

advertising and solicitation of patients in the AMA Code of Ethics.

- that concern for maintaining high levels of professionalism may *not* be sufficient basis for restraints, particularly if the policy can be interpreted as affecting the economics of practicing medicine.
- that in matters of accreditation and certification, the test for the FTC and the courts is: do the procedures simply establish the *minimum* necessary to protect public health, or do they serve as excessively high economic or entry barriers to the practice of medicine?
- that physician control of Blue Shield may or may not be in the public interest.

In Mr. Gaines' view, the proverbial bottom line is, "Professionalism is simply no longer an adequate basis for a restraint." Unfortunately many professionals, including lawyers, are only slowly beginning to realize the effect which the approach taken by antitrust officials could have on their professions.

The unprecedented challenges to the concept of professionalism being made today are led by those who take the view that professional status only provides a shield to protect the practices of an isolated group from the scrutiny of the public eye. In addition, fighting off antitrust challenges can be extremely expensive. I understand that any damages established are automatically tripled as part of any judgment in any antitrust civil suit. Furthermore, the antitrust laws carry criminal penalties for more blatant violations.

Mr. Gaines' remarks have certainly captured my attention. However, I feel I must caution the enforcers to consider the potential impact their approach could have on the health of Americans. I urge MSV members to think about the potential implications the antitrust laws could have on their practices and on the way our professional associations operate. Many of our traditional assumptions of immunity are no longer valid. Mr. Gaines foresees that "the future is more complex for the professionals than in the past, and—at this point—not at all certain." I admit that I must agree with him.

William J Hagood, Jr., MD, President,
The Medical Society of Virginia.

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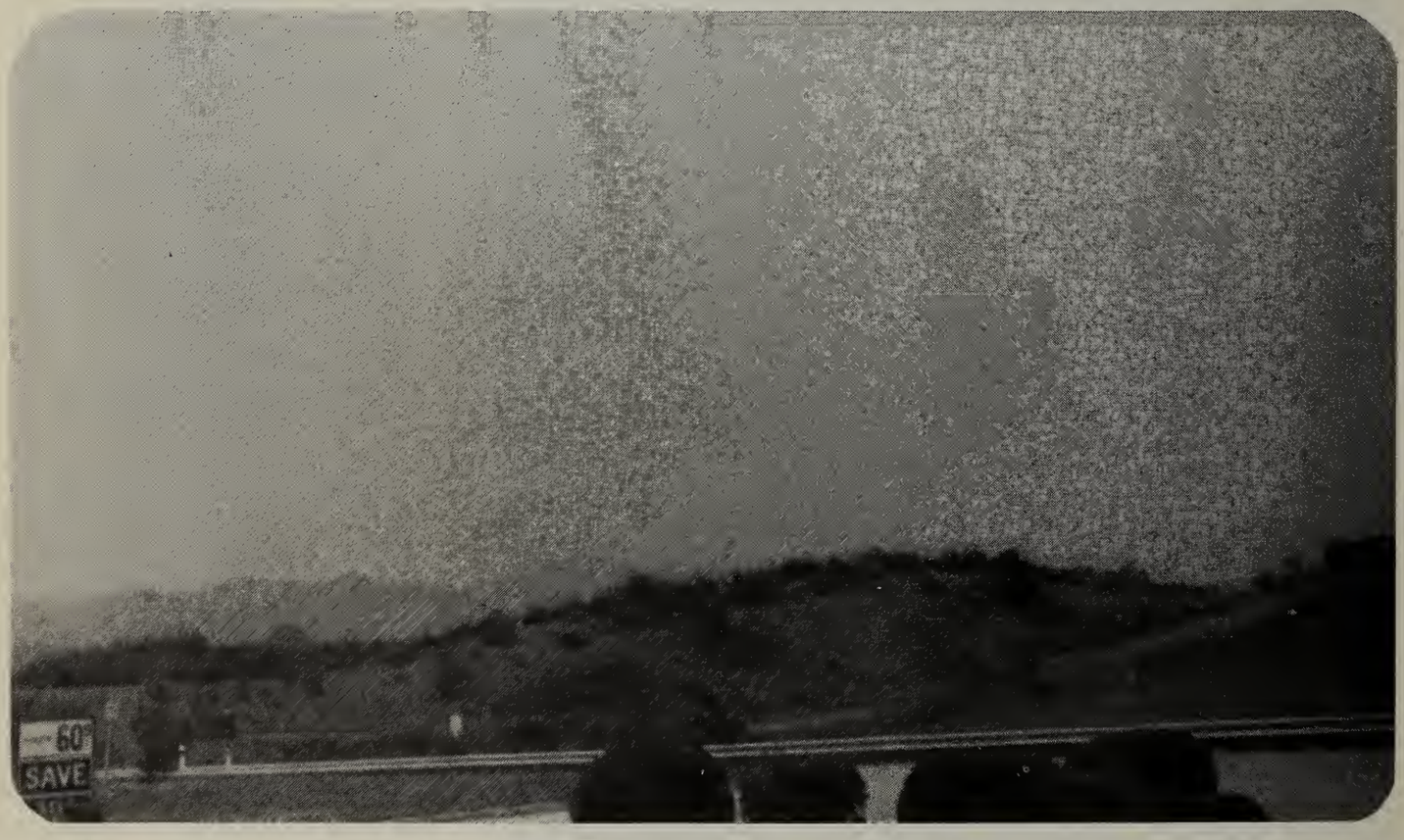
LETTERS TO THE EDITOR

By a Native Son, We Stand Corrected, and Virginia History Is Enriched

I enjoyed very much the editorial on Dr. Thomas Walker and his sojourns into the wilds of Southwestern Virginia[1]; he was indeed a most interesting physician. At least one detail, however, should be corrected. The author refers to a tunnel on Interstate 77 through Big Walker Mountain at "Bristol". This tunnel is truly an engineering marvel and is on Interstate 77 but between Bluefield and Wytheville, Virginia, some 70 miles to the east of Bristol. Very likely Dr. George Kegley of Bland Courthouse has already called this matter to your attention, since the tunnel is in that county.

You might well speculate as to why a surgeon in Norfolk, Virginia, would be interested in and have any factual data about this part of the state. There is a simple explanation—I was raised along the Wilderness Road to which the editorial alluded and hunted on Big Walker Mountain as a boy. I have some data and photographs regarding a prior exploratory expedition headed by Stephen Holstein, for whom the Holston River was subsequently named (at which time Holstein changed the spelling of his name). This preceded Dr. Walker's trip by several years, and among the members of the Holstein party was a progenitor of mine, James Davis. He established a home at the headwaters of the Holston and secured a grant from the Royal Governor for 1,400 acres. His home became a neighborhood fort and the tract was known as "Davis' Fancy". It has also been referred to as "Davis' Bottom" (Dr. Walker used this name in a journal entry), "Davis' Fort", and "Davis' Valley". The last is the current designation. I always thought that "Fancy" was much more elegant than any of the others!

A patient of mine, Mrs. Jane Wingfield, who works as a ward secretary in DePaul Hospital here in Nor-



Looking up the valley from I-81, not far from Davis' Fancy, in the direction of "Big Walker," the mountain named for the early Virginia physician, Dr. Thomas Walker. *Photographs by Mrs. Jane Wingfield.*

folk, recently passed through that part of the country on a trip to Eastern Tennessee and to Emory, Virginia (where her late father was a Methodist minister at Emory and Henry College). Knowing of my great interest in the area plus the fact that I had been raised there, she took the time and effort to inquire at Groseclose, Virginia, as to the whereabouts of Davis' Valley. She photographed the historical marker ten miles east of Marion, Virginia, on old Route 11, (which actually led into the Wilderness Road to the west), my family home, and also took a more or less panoramic view up the valley toward distant blue mountains. My old home and the fort foundation are about one mile from where this panoramic photograph was taken; geographically, it is much further to the east than the incomparable Cumberland Gap.

An extraordinary coincidence occurred recently at the historical marker pictured here. It was reported in a Marion newspaper,[2] and another patient of mine, Mrs. Ann Ballard, sent me a clipping; Mrs. Ballard now lives in Norfolk but is originally from Rich Valley, which is just north of Big Walker Mountain.

It seems that Gary Davis of St. Petersburg, Florida, my second cousin and a seventh generation grandson of James Davis, was visiting in the area and stopped at the marker. He saw a young man taking a picture of it, and, his curiosity aroused, asked the photographer why he was interested in it. "Because I am Carl Holston, seventh generation grandson of Stephen Holston," the young man replied. Carl Holston lives in Baltimore, Maryland, and was getting information on the Holston family. The newspaper



Historical marker on Route 11 commemorates James Davis and Davis' Fancy (1748), his home and neighborhood fort.



Family home (1832) in which Dr. Charles E. Davis, Jr., grew up. Foundation of the early fort is in the yard.

recounts that the two young men had lunch with my first cousins, Maxine and Kathleen Davis, and became new friends.

To return to the illustrious Dr. Walker. Many stories abound about the various methods employed whereby Mr. Jefferson and the Virginia legislators escaped the British force intent on their capture. The famous Jack Jouett ride from Cuckoo Tavern to Monticello to warn them is reminiscent of Paul Revere. It does at least give Virginians something to refute the always superior claims of those from New England!

Near the eastern extremity of Charlottesville, adjacent to a gas station and not far from the Martha Jefferson Hospital, stands a lofty and magnificent oak tree. According to the state historical marker standing there, it was under this tree that Tarleton, the commander of the British cavalry contingent attempting to capture the Sage of Monticello and the governing body of Virginia, pitched his tent. History does not record whether this preceded the imbibing of the juleps mentioned in the editorial as having been kindly provided by Dr. Walker. It does prove that drinking before noon is always bad!

Charles E. Davis, Jr., MD

810 Medical Tower
Norfolk VA 23507

1. AG: Virginia physician found Cumberland Gap. Va Med 105:467, 1978
2. Smythe County *News*, July 10, 1978

Editors' Note: Dr. Davis is President Elect of The Medical Society of Virginia. He is to assume the presidency at the Annual Meeting in Williamsburg this month. ■

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MEETINGS ABOUT MEDICINE

NOVEMBER

17-18

Progress in Pediatrics 1978 (Children's Medical/Surgical Center, Johns Hopkins), **Baltimore.** Office of CME, 301/955-5880.

18

Care of the Critically Ill Patient: the Management of Serious Infections (Fairfax Hospital), **George Mason University Lecture Hall, Fairfax, Virginia.** Mrs. Shirley Kerzaya, 703/698-3219.

30-Dec. 1

Advances in Obstetrics and Gynecology (Dept Ob-Gyn, MCV) **Richmond.** Mrs. Erma Blanchard, 804/786-0496.

DECEMBER

1-3

Neurologic Problems of Infancy and Childhood (MCV/VCU, UVaSM, and EVMS Divisions of Child Neurology) Cascades Meeting Center, **Williamsburg.** James E. Etheridge, Jr., MD, 804 446-5600.

2

Sixth Annual **Geriatrics Symposium** (Baltimore City Hospitals, American Geriatrics Society, Johns Hopkins), Baltimore City Hospitals, **Baltimore.** Program Coordinator 301 955-5880.

JANUARY

15-18

Alton D. Brashear **Postgraduate Course in Head and Neck Anatomy** (Dept of Anatomy, MCV), **Richmond.** Dr. Hugo R. Seibel, MCV Station, Richmond VA 23298. 40 elective hours AAGP

22-26

Southern Clinical Neurological Society, Annual Meeting, Pier 66 Hotel, **Fort Lauderdale,** Dr. B. J. Wilder, University of Florida Hospital, Gainesville FL.

25-26

2nd Annual **John M. Nokes Lecture: New Developments in Diagnosis and Treatment of Gynecological Malignancies** (UVa School of Medicine), **Charlottesville.** Mrs. Mary Lou Currier, 804 924-5318.

JANUARY

27-31

American College of Allergists, 35th Annual Congress, San Francisco. Frances P. White, 313 447–8111.

29-February 2

Sixth Annual Neurological Update Symposium (University of Miami School of Medicine), Konover Hotel, **Miami Beach.** 6, 24, and 30 hrs. CME D23-3, PO Box 016960, Miami FL 33101, (305) 547-6716.

FEBRUARY

8-9

Treatment of the High Risk Infant (UVa Children's Rehabilitation Center), **Charlottesville.** Anne Raynor, (804) 924-5161.

17

American College of Physicians, Virginia Regional Meeting, Omni International Hotel, **Norfolk.** Edward W. Hook, MD, Box 466, UVa School of Medicine, Charlottesville VA 22901.

23-24

Virginia Chapter of the American Academy of Pediatrics, Annual Meeting, Williamsburg, Douglas E. Pierce, MD, (703) 344-9213.

MARCH

2

Law Institute on Hospitals and Medicine (MCV/VCU), **Richmond.** Mrs. Erma Blanchard, (804) 786-0496.

4-8

Annual Radiology Postgraduate Course: Bone Radiology (MCV/VCU), Conference Center, **Williamsburg.** Mrs. Erma Blanchard, (804) 786-0496.

8

Medico-Legal Seminar (MCV/VCU and Office of Chief Medical Examiner), **Roanoke.** Mrs. Erma Blanchard, (804) 786-0496.

19

The Team Approach to the Child with Muscular Dystrophy (UVa Children's Rehabilitation Center), **Charlottesville.**

How to Comply With the New CME Requirement

What is the requirement?

All active members of The Medical Society of Virginia shall complete a minimum of 90 hours of approved continuing medical education every 3 years.

When do the requirements go into effect?

January 1, 1979.

Then my first reporting period will cover January 1, 1979, to January 1, 1982?

Not necessarily. Reporting will be started on a "staggered" basis, with the active membership list divided into three groups according to the first letters of surnames.

Group 1 will be those members whose surnames begin A through G. If you are in Group 1, you will be required to complete 30 hours of approved CME within one year, or by January 1980. Thereafter, you will be on the 90-hours-every-3-years schedule.

Group 2 will be those members whose surnames begin H through N. If you are in Group 2, you will be required to complete 60 hours of approved CME within 2 years, or by January 1981. Thereafter, you will be on the 90-hours-every-3-years schedule.

Group 3 will be those members whose surnames begin O through Z. If you are in Group 3, you must complete 90 hours of approved CME within 3 years, or by January 1982, and report 90 hours at 3-year intervals thereafter.

So if I'm in Group 1, my first report is due January 1, 1980?

You may send your report then if you wish, or even earlier, but the rules give you two months of grace:

If you are in Group 1, your report for the initial 1-year period must be filed no later than March 1, 1980.

If you are in Group 2, your report for the initial 2-year period must be filed no later than March 1, 1981.

If you are in Group 3, your report for the initial 3-year period must be filed no later than March 1, 1982.

Will I be notified of the due dates for my reports?

No. That is your responsibility.

How do I report?

A form on which to report your credits will be enclosed with the CME record keeping booklet to be sent to you early in 1979. Or write to the MSV Commission on Continuing Medical Education, 4205 Dover Road, Richmond VA 23221.

What may I report?

The same rules for credits apply as those for the Virginia Physicians Recognition Award. One-third or 10 hours per year of your CME hours must qualify for Category 1; these are CME activities with accredited sponsorship. The balance of your reported hours, or 20 hours per year, may be distributed among Categories 2 through 6 in any way you wish.

Any approved specialty society requirements will be accepted for credit.

What if I have more than 90 hours of credit in any one reporting period. May I carry them forward to the next reporting period?

No. Hours in excess of the minimum requirement may not be carried forward for credit in a succeeding period.

Are there any exemptions?

Yes. 1. A new member is exempt from the CME requirements for the calendar year in which he becomes a member. 2. A member shall not be required to comply during a period of active military service, and appropriate prorations may be made.

What happens if I do not comply with these requirements?

You may lose your MSV membership.

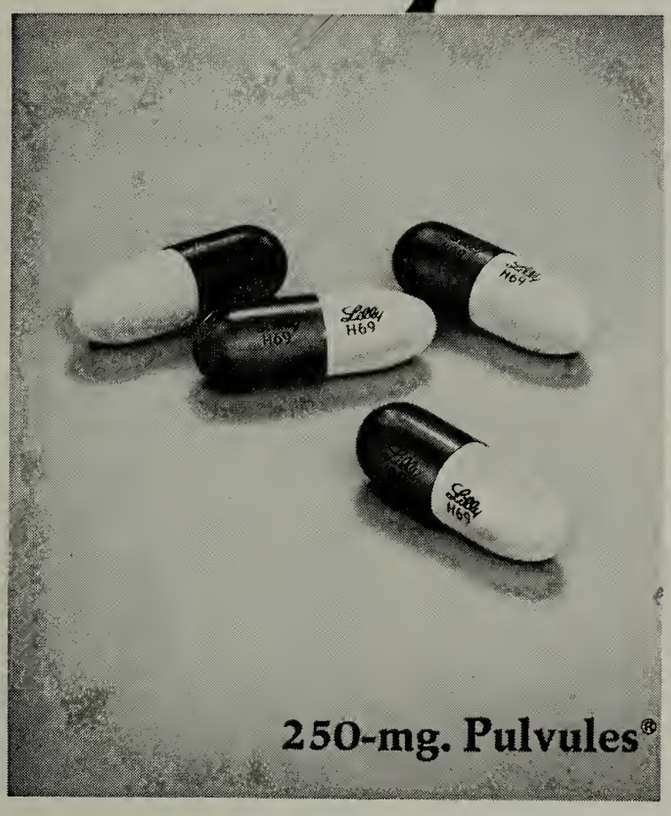
1. If you fail to file your report by the due date, you are notified of the delinquency and given 30 days in which to file. If that notice, sent by the Committee on Membership, elicits no response, the House of Delegates may receive a recommendation that you be suspended from membership.

2. If, in the judgment of the Commission, your report does not satisfy the minimum requirements, the Committee on Membership is notified and a hearing held. Should the Committee rule that your credits are indeed insufficient, you will be given a 30-day period in which to satisfy the requirements. Should you fail in that request, the Committee may recommend to the House of Delegates that you be suspended from membership. **A.G.**

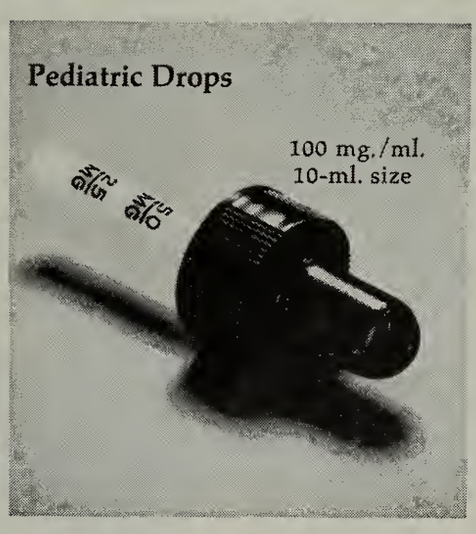
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Family Asthma Program: Parents of asthmatic children are surprised By the marked benefits of this pilot project

F. Stanford Massie, MD, and Susan Homestead, MSW, *Richmond, Virginia*

THE TWO-YEAR collaborative effort of public, private and voluntary resources reached fruition early this year with the first Family Asthma Program. Sponsored by the Richmond Region of the Virginia Lung Association, the pilot project melded medical, psychological and physical therapy professionals to produce a program for the families of children with chronic and severe asthma. Physician referral was necessary and there was a nominal fee. The first program was conducted weekly at the University of Richmond in the evening.

Objectives of the program were two-fold: 1) to educate parents as to the nature of asthma and the methods used to control the effects of the disorder; and 2) to identify and pinpoint problems within the family system which may be related to the disease. Simultaneously, a children's group concentrated on recreational exercise as the means to achieve the following goals: a) habituation of the child to diaphragmatic breathing, b) improvement of posture, c) decreasing anxiety during an asthmatic attack, d) improving muscle tone, e) experiencing group socialization, f) discussion of proper nutrition and good health habits, basic knowledge of lung anatomy and the disease entity, asthma, and g) improving self-image.

The format of the program included two screening sessions, in which each family had the opportunity to learn about the program, meet staff and take pre-tests. These tests were set up for base-line identification of general knowledge and attitudes about asthma, trigger factors, and a detailed list of problems relating to their child. Eight subsequent two-hour weekly sessions were then scheduled.

The first evening session was held jointly—the first half providing an opportunity for the family to meet all participating physicians, behavioral co-directors (psychologist and clinical social worker), the physical therapist, the karate instructor and the staff members of the Virginia Lung Association. Participant socializing was encouraged. A film from the Allergy Foundation of America was shown depicting a similar program conducted by the Easter Seal Rehabilitation Center of Southwestern Connecticut. The prototype for the Virginia program was the Family Asthma Program of the American Lung Association of Hennapin County, Minnesota.

The second session began with a physician's presentation to the parents on pathophysiology of asthma. After the presentation and a question and answer period, parents spent the second hour in small groups, with a leader reinforcing, interpreting and discussing the presented information. At these smaller, less formal groups, parents were encouraged to share concerns in day-to-day living with asthma. Successes and failures in family interaction were discussed. Simultaneously, the children proceeded to



Youngsters enrolled in the Family Asthma Program are gathered around Dr. F. Stanford Massie (left) to hear him explain coping mechanisms for their asthma.

their own area for karate, swimming and various specialized breathing exercises. A physician presentation was made to the children's group, discussing the same medical information at a level understandable to youngsters aged 7-15.

At subsequent sessions, physicians presented topics that included "The Environment and Asthma," "Immunotherapy or Desensitization," "Drug Therapy," "Role of Infection in Triggering Asthma," and "Exercise-Induced Wheezing." The group co-leaders encouraged discussion around the effects of chronic illness on the family, individual child, siblings, and the child's growth and development as they relate to self-confidence and self-image. The emotional effects of guilt, resentment, suppressed anger and resultant behavior were clarified. Exaggerated role-playing, anecdotal material and research data were utilized to promote discussion.

Summary evaluations were completed by parents after each session. The final session gave the parents an opportunity to observe the children's activities.

Seven families participated in the first program. Because of the small sample and brief experience, specific conclusions will not be reported. Our observations will be reflected in future program changes. Larger groups are planned and the program will be extended to ten sessions to incorporate more parent-requested psycho-social information.

The first group's participants were chosen by the physicians of the Virginia Lung Association Asthma Program Planning Committee because of the severity and intractability of their disease. While some of the families had tried various therapies, such as the Virginia Treatment Center, asthma camps and psychotherapy, along with their medical regimens, and felt they could learn or gain little, many expressed surprise at benefits of the program. These included the child's increased self-confidence, more responsibility and less panic toward their disease.

For more on asthma, see page 775.

With the cooperation, support, interest and referrals of the medical community, such a program will decrease stress and improve the coping abilities of families with a child who must deal with chronic asthma. The success of this pilot program will lead, we hope, to the development of other programs across the state.



Recreational exercise to achieve therapeutic goals is part of the program. Here a therapist skilled in karate shows four young asthma patients basic punching techniques.

Physician Referral is mandatory for admittance to a Family Asthma Program. If you have a young patient with chronic and severe asthma and would like to refer the child and his family to a program, write to Dr. F. Stanford Massie, St. Mary's Office Building, Suite 409, 5855 Bremo Road, Richmond VA 23226, or call him at (804) 288-4105.

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THE AUXILIARY

In Arlington, a Worry-In Takes Worries Out

There's a lot of heavy worrying in the world today, and members of the Auxiliary to the Arlington County Medical Society are trying to alleviate it with their annual "Worry-In" workshops. These are all-day seminars, presented as a service to the community, during which prevalent areas of anxiety are dissected and illuminated by health professionals.

Mrs. Stephen J. Sheehy, health education chairman, originated the first Worry-In in 1973, after hearing of similar workshops sponsored by auxiliaries in Wyoming and Florida; with the exception of the year she served as the Auxiliary's president, she has led each one since. The workshops are funded by the Arlington County Medical Society (which eliminates *that* worry).

This year's Worry-In drew 130 persons to St. Mary's Episcopal Church in Arlington. "Family Problems and Their Solutions" was the subject of Dr. Francis Andres' segment; he is a psychiatrist in private practice in Fairfax. Loretta Nowakowski, PhD, nursing professor at Georgetown University, discussed "What Goes On in the Disoriented Person," a subject of particular concern to those who have elderly persons living in their homes. The third topic, "I Thought I Knew Who I Was," proved the most popular; many in the audience stayed long after the allotted time to ask questions of Charles Crotty, PhD, psychologist and marriage counselor who discussed the subject.

Between segments of the workshop there was free luncheon, with the delicious homemade vegetable soup of Mrs. Joseph O. Romness, social chairman, producing an ease of mind and body highly appropriate to the occasion.

Contributed by Mrs. Dan J. Feriozi, Publicity Chairman, Arlington Auxiliary.



Mrs. Romness ladles out her home-made vegetable soup.



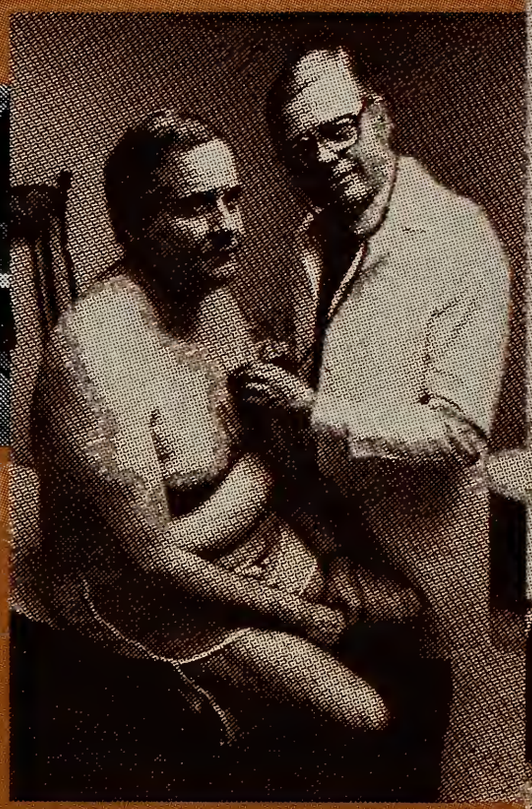
Mrs. Henry L. Danaceau, president of the Arlington Auxiliary.



Mrs. Sheehy (left), health education chairman and the workshop's leader; Mrs. Robert P. Nirschl (right), program chairman; and Dr. Crotty.

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ALCOHOL: Physicians Now Charged With Society's Ancient Problem

Milton Ende, MD, *Petersburg, Virginia*

With its classification as a disease, alcoholism became the physician's responsibility. Reviewing the rise of alcohol's status, the author comments on the efficacy of treatment today and advocates decisive changes.

WESTERN civilization has been schizophrenic where alcohol is concerned. Although no simple explanation of the alcoholic problem can be found, some things have gradually become self-evident. Society has found it necessary to give alcohol some status.

The first mention of alcohol in the Old Testament concerned Noah, who also became known as the first recorded drunk. The Bible forgives him for this by stating he did not know the effect of the beverage. Now follows a series of stages in which alcohol is constantly glorified, while at the same time man constantly recognizes its evil. In Judaic religion, at the circumcision of a child, one cup of wine is drunk; at a marriage, two cups of wine; at Passover, four cups. A cup of wine was offered to the bereaved before a funeral, and at a meal of comforting up to ten cups might be consumed. It was forbidden for Jews to drink wine made by non-Jews because it might have been prepared for idolatrous worship. Apparently prior to the beginning of the Jewish religion, wine was used by pagan religions. On nearly all religious holidays, including weekly Sabbath services, a blessing is made over wine. The Old Testament states, however, that prayers from inebriated individuals are not acceptable to God. It was specifically forbidden for judges on the Sanhedrin to drink any wine while hearing a major case. The first legal test for inebriation was introduced about this stage in history, 2800 BC. The criteria was whether the individual was capable of addressing himself properly to the king.[1] Approximately 3.2 ounces of wine was regarded as sufficient to cause intoxication. If he walked 3300 feet, a drunken person was considered to be sober, unless he drank strong Italian wine, in which case he had to walk three times as far. It has been thought that alcoholism was less among Jews than other ethnic groups because of the early introduction of wine into their life-style thru religious ritual; however, studies now suggest that the more acculterated Jewish youths adopt the drinking patterns of the population in which they live.[1] Interestingly enough, in the Judaic religion there has been only one blessing over water, which has been abandoned for many years.

At a time when our government is considering the possibility of labeling alcoholic beverage as being harmful to the pregnant female, we might look at an

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interesting story in *Judges,* Chapter 13. There was a man named Manoah whose wife was barren and they most anxiously desired to have a child. An angel of the Lord appeared and told her she shall conceive and bear a son. And the angel said, "Now therefore beware, I pray thee drink not wine nor strong drink, and eat not any unclean thing, for lo thou shalt conceive and bear a son." The angel of the Lord was not satisfied with one visit, one admonition, but he appeared the second time and repeated the same phrase again, thou shalt not drink wine nor strong drink. The son that was born was Sampson. Sampson was a Nazarite (one who does not drink or use a razor).

Moving from Jewish to Christian religion, we find a further elevation of the status of alcohol, for now wine becomes symbolic of the divine. The Catholic religion believes by trans-substantiation the wine when blessed becomes the blood of Christ. There is a prayer used in the Eucharistic rite in which wine and water are poured into a chalice. The wine symbolizes the divine nature of Christ and the water the human nature.[2]

Jesus at the last supper distributed wine to the apostles and thus it becomes difficult to condemn alcohol, but the church constantly sought to restrain its people from over-indulgence. For example, the marriage debt (the mutual right of man and wife validly married to have sexual intercourse) did not have to be fulfilled to a person who was drunk.[3]

During the dark ages, the production of wine steadily declined and possibly would have been lost except for their cultivation for communion service.[4] The vineyards were particularly an ecclesiastical preoccupation. Such orders as the Christian Brothers or Benedictine perpetuate the cultivation and sale of alcohol today on a commercial basis. In the Episcopalian religion, the blessing over wine is a major part of the ceremony. The minister has to approximate the amount which will be consumed by the congregation and if he overjudges, he first will attempt to consume it and if he cannot, he turns to the congregation for help. The wine cannot be poured back into the original container nor can it be poured into the sink as it would enter sewer systems. Therefore, there is a special door so it can be poured on the ground or a special pipe that will take it from the alter into the ground. Since the wine when it has been blessed is considered to be trans-substantiated and therefore divine, it cannot be degraded.

In the Islamic religion, a different sequence of events was taking place. Drinking of alcohol in any form was specifically labeled a sin. The Koran states in *Surah* 2:219: "They question thee about strong drink and games of chance. Say: In both is great sin and (some) utility for man; but the sin of them is greater than their usefulness."[5] In at least two other places, the Koran states that the taking of alcohol is a vice. Apparently because of this, it is interesting to note there are no statistics available on alcoholic consumption in the Islamic countries. In those countries of the Islamic faith, such as Algeria, which were colonialized by France, there is minimal local consumption of wine and the greatest majority of the product is exported. This is one of the places in the Arabic world where some figures are available.

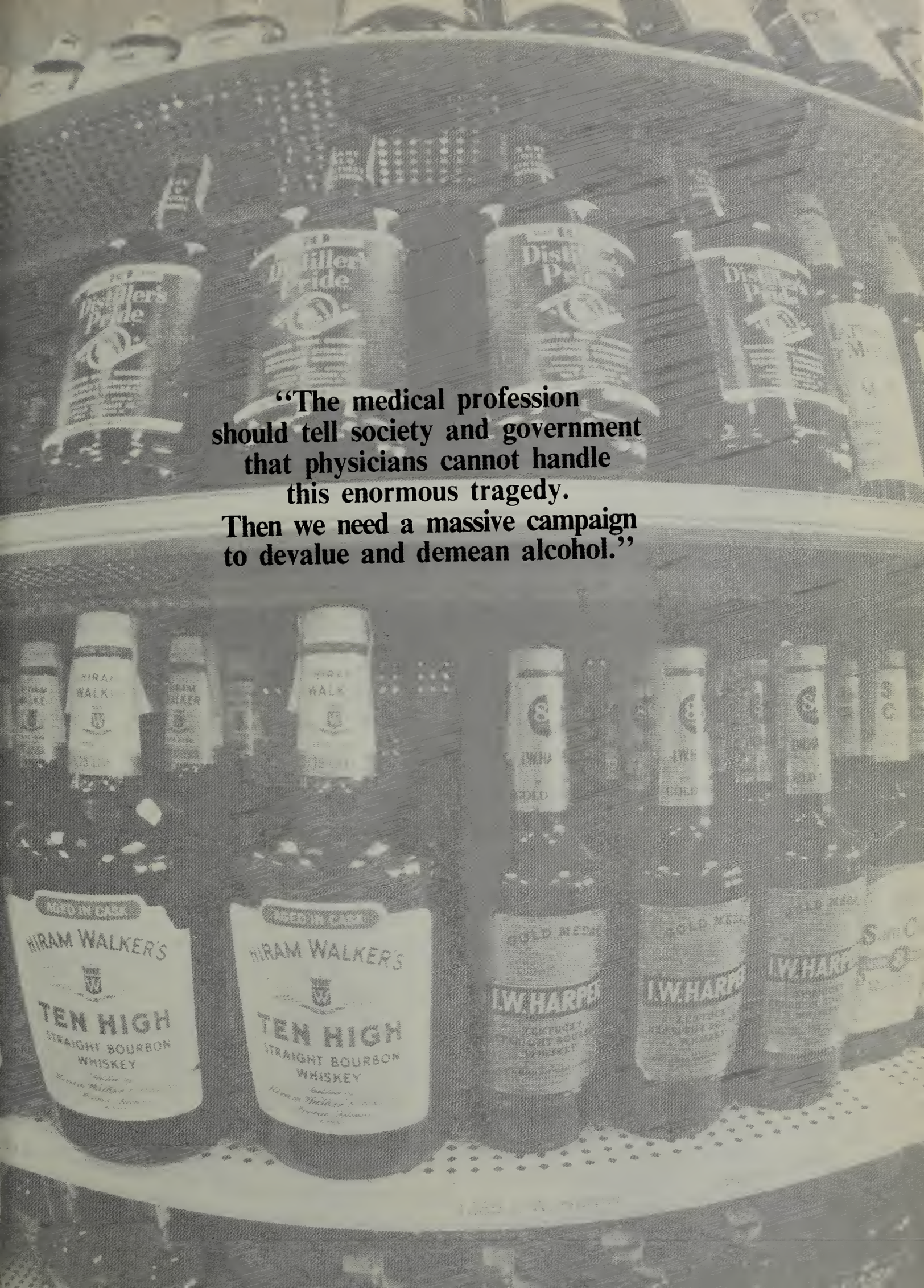
A major consumer of alcohol is Russia, which consumes approximately twice as much hard alcohol per capita than any other nation in the world.[6] The official Russian press formerly stated "that drunkenness is the remnants of capitalism and people's consciousness". It has now been forced to note that this is an alarming condition throughout Russia and the simple explanation given above is not satisfactory.[6] The Russian Orthodox church did not limit excessive drinking, although it condemned drunks.[6]

IT IS estimated that in the largest Soviet Republic (the Russian Federation, or Russia in the narrow sense of the word) there are 10.4 million alcoholics or problem drinkers. This does not include the Slavic or Baltic Republics.[6] It is thought that there are 10 million problem drinkers in the United States. The National Safety Council estimates that approximately 800,000 highway accidents and 28,000 deaths, or 50% of all fatal accidents, result each year from the inebriation of drivers or pedestrians.[6] The FBI reports that in one-half of all murders either the killer or the victim was drinking. Divorces in both Russia and the US that are connected with alcohol abuse is roughly the same, 40-50% of all cases.[6]

Alcoholism is a major health hazard, ranking along with cancer, heart disease and mental illness. Treatment in both this country and Russia countries is similar and equally unsuccessful. The life expectancy of the alcoholic in the US is 12 years less than normal. In Russia it is 15 years below normal.[6]

During the period of the Volstead Act in this country, there was a decrease in homicides and minor crimes as well as a decrease in drunken driver highway accidents. One group claims that during this 13-year period, the general crime rate, in spite of Mafialike activities occurring in the country, declined 25-40%

Alcohol received its latest elevation in 1970, when alcoholism was officially classified as a disease by the federal government. This was done by Public Law 91-616.[7] With this act the treatment of alcoholism basically became the responsibility of the physician. However, there were many physicians who felt that a


"The medical profession
should tell society and government
that physicians cannot handle
this enormous tragedy.
Then we need a massive campaign
to devalue and demean alcohol."
HIRAM WALKER'S
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self-destructive condition that was not a disease had been placed in their laps. There was a considerable number of letters concerning this point in a recent issue of the *Annals of Internal Medicine.*[8] It was the feeling of these men that a halt had to be called as to what a physician can do. Once something is classified as a disease, it becomes the responsibility of the physician to cure it and at the same time it takes some of the onus off the alcoholic patient.

In the *Journal of the Studies of Alcohol,* an article appeared in which 100 cases of alcoholisms were randomized between two regimens, one group receiving treatment and the second group receiving advice. The treatment group received all the modalities available for one year, while the advice group was only talked to for 1/2 hour one time by a psychiatrist. The results at the end of the year were exactly the same[9]—minimal success in both groups. In addition, the same article reviewed all previous studies published on alcoholic treatment. They note that there are 31 studies with negative results and only five studies with suggestively positive results. It was felt that a close scrutiny of the five reports of positive results was subject to bias. The enormous discrepancy between positive and negative results, 31 to 5, is very disturbing for people who are being treated for alcoholism. An editorial commenting on this article appeared in *Lancet,* September 3, 1977, and said that there can be little doubt that the previous forms of treatment need to be substantially revised. "With the success of intensive treatment now a matter of debate, thoughts must turn to prevention."[10] The article even questioned the effect of Alcoholics Anonymous being of much value.

THE FIRST thing that needs to be done is this: The medical profession should say to society and the government that we as physicians are not handling and are not capable of handling this enormous tragedy. Society should no longer hide behind the classification that this is a disease, which acts as a sop to its consciousness. It is not recommended that we go back to the days of prohibition. We need, however, an enormous campaign to devalue and demean alcohol. The religions of the West need to lead the way by taking it out of their services and making blessing over water instead of wine. The government needs to stop handling the problem so gently that it takes years to label something harmful for one's health when taken in excess. At present we are debating whether such a label warning pregnant women not to drink is in order. The story of Sampson, 2800 BC, answers this question.

The campaign against smoking in this country has reached almost maniacal proportion, yet there is no scientific proof that being in a confined place with someone who is smoking is harmful to the other person's health, except possibly the emotional reaction to the situation. This type of passionate feeling needs to be applied to the alcoholic, but instead we have milk sop slogans such as, "Friends don't let friends drive drunk", implying that it is someone's fault other than that of the alcoholic when he drives inebriated. (Try to stop someone from driving when he is drunk!!!)

The government is constantly removing substances from our diet which may be carcinogenic.[11] Alcohol is such a substance. The incidence of primary cancer of the liver has a high association with cirrhosis of the liver. Every ABC store in the state needs to have posted warnings concerning the product being sold. Airplane flights should not be an invitation to imbibe. One almost feels on a charter flight that he is being cheated if he doesn't take the drinks offered. Americans do not seem to grasp that beer contains a high alcoholic content. Television beer advertisements should emphasize drinking of a six-pack is sufficient to convict you of drunk driving. Hostesses should be more inventive of non-alcoholic drinks at social gatherings. The medical profession needs to be exemplary and curtail its cocktail consumption at both its social and educational functions.

In short, we need to say to the world, the job of treating alcoholics is not being done and enormous funds are being wasted.

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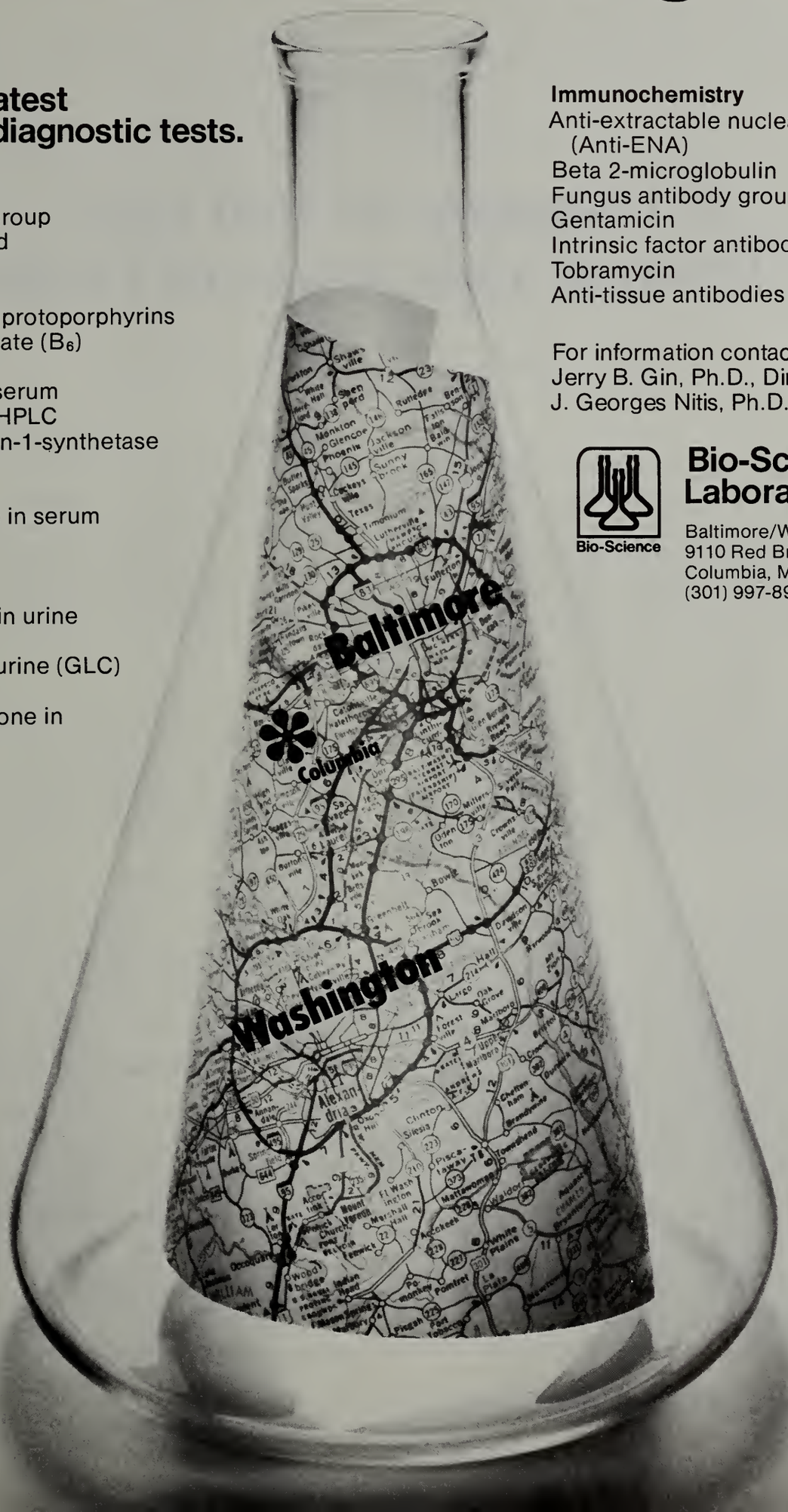
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CT Scanning in Head Injury: Practical Applications and Pitfalls

R. C. Sweet, MD, J. D. Miller, MD, and
M. Lipper, MB, ChB, *Richmond, Virginia*

Computed tomography has replaced the invasive techniques of angiography and ventriculography as the diagnostic study of choice in head injury. It has proven not only accurate but extremely safe. Problems still exist with diagnosis, however. Representative examples of common lesions seen in trauma are presented along with the errors in diagnosis most frequently made and how to avoid them. The common artifacts, including movement, are also discussed.

SINCE its introduction in 1971 by Hounsfeld and Ambrose,[1,2] computerized tomography (CT) has been found to be an accurate and safe diagnostic tool in a variety of intracranial diseases including head injury.[1-6] It has replaced the invasive studies of angiography and ventriculography as the procedure of choice in head injury. For the first time we are able to see both sides of the brain with one study and to diagnose the nature of a lesion without surgery.

Briefly, the CT scanner transmits a finely collimated beam of X-rays while rotating 180° through given planes of tissue, and detectors directly opposite the source take multiple readings of X-ray absorption. Thousands of simultaneous equations are generated, which are solved by an on-line computer giving readings of absorption coefficients for small volumes of tissue in the plane of the slice.[7,8] An X-ray absorption scale is then created with water equal to 0, air equal to −1,000, and bone equal to +1,000. A direct printout of these numbers may be obtained, but usually they are converted to a black through grey to white scale, and a picture of the slice of brain scanned is recorded on X-ray film or on polaroid film from an oscilloscope. In this way small density differences in soft tissues can be seen which are not possible with ordinary X-rays. CT is 100 times more sensitive than plain X-rays in picking up these differences.[9] Most intracranial tissues appear in the range of 10-40, and thus brain tissue appears in various shades of gray with CSF appearing black (+2) and fresh blood clots appearing white (+56) because of calcium, loss of serum, and breakdown of hemoglobin.[8]

CT scanning has been available at the Medical College of Virginia since August 1975. Since then until September 1977, approximately 6,000 scans have been done, of which 700 were related to trauma, including serial scans. During this period, 140 patients with acute head injury, who were unable to follow commands, have had CT within one hour of admission. Twenty-six (19%) had normal scans, 39 (28%) had bilateral lesions and 75 (53%) had unilateral abnormalities (Table 1). The following dis-

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cussion is based on this series and a review of the literature.

Morbidity and Mortality

The morbidity and mortality associated with doing an unenhanced CT scan is negligible. It is a completely noninvasive technique and the radiation dose to the skin is only 1.0-2.5R. By comparison a plain skull film gives a dose of 2.5R per radiograph and doses and high as 10R are associated with angiography. The gonadal dose has been calculated to be 1mR per scan. Therefore, performing a CT scan is as safe as obtaining a plain skull X-ray.[10]

Injection of diatrizoate meglumine and diatrizoate sodium (Renografin^{R}) for enhancement, which shows lesions that damage the blood brain barrier, has caused allergic reactions, including bronchospasm in several patients and in this institution there has been one proven death. However, contrast injection is usually unnecessary in acute head injury and in the case of chronic subdural hematomas, where enhancement may prove useful, the workup usually proceeds at a slower pace and there is time to obtain a medical history to rule out iodine allergies. By the time followup studies in acute injury are needed, iodine sensitivity should have been ruled out.

In all patients with acute head injury, a lateral cervical spine film should first be obtained to rule out cervical fractures or dislocations. This is important since the patient must be moved to the CT room and his neck must be moved in the scanner to obtain the correct views. In life threatening cases the neck may be immobilized with a collar and all patient movement controlled by the attending physician. In this situation, neither flexion nor extension can be allowed, but it is still possible to get useful information from the CT scan.

As far as patient comfort and safety is concerned, CT is an ideal investigation, but it requires that the patient remain still for several minutes. This is not stressful for a cooperative patient, but among the most severely injured patients are those who will be most uncooperative and general anesthesia will then be necessary in order to obtain interpretable scans. Since many of these patients have also sustained multiple injuries and can develop acute shock or cardiorespiratory arrest at any time, it is essential that resuscitation equipment be available at all times as well as space for respiratory equipment.

Table 1. Initial CT Scan Findings on 140 Patients with Severe Head Injury

Normal			26
Unilateral lesions			75
Increased density		69	
Epidural hematoma	5		
Subdural hematoma (acute)	32		
Intracerebral hematoma/contusion	32		
Decreased density		6	
Bilateral lesions			39
Increased density		11	
Swelling		28	
Total patients			140

Table 2. Outcomes in Two Series of Head Injuries with 40% Mass Lesions Requiring Surgery.

	Good Recovery	Moderate Disability	Severe Disability	Vegetative	Dead	Total
Previous series[12]	36%	24%	8%	2%	30%	160
Present series (CT)	33%	21%	8%	2%	36%	113

* Graded according to Jennett and Bond

Since outcomes have not changed with CT management (Table 2), we are able to conclude that CT scanning is equal to the previous best diagnostic test (ventriculography) available in the practical area of patient management. CT, however, goes much further in that it provides information about both sides of the brain as well as the nature of intracranial mass lesions (e.g. hemorrhage vs. edema). CT scanning takes approximately 30 minutes longer to perform than ventriculography, but since the outcomes have not changed it can be assumed that this delay is not having an adverse effect on our patients. Angiography has not been the primary method of diagnosis at this center since the use of twist-drill ventriculography was instituted in 1972 because of the delays associated with setting up and completing the study. All of the patients receive 500cc of 20% mannitol (Osmitrol) which protects the brain while the study is being obtained.

Lesions Seen On CT

Previously, a significant mass lesion was defined as one which caused a lateral shift of 4mm or greater of the midline of the ventricular system on AP skull X-ray.[13] With the CT scan we are detecting many more lesions than before and the surgical criteria for the CT scan are still being evaluated. Generally, scans which show a dense lesion with a significant shift of the ventricular system visible without measurement represent a significant mass lesion for which surgery will be necessary. In chronic subdural hematomas a shift of the midline is all that may be seen (Fig. 5, next page.) Not only has CT become the procedure of choice in head injury management, but it is very useful in defining intracranial pathology and providing data to make more accurate prognoses. A recent study, for example, shows that patients with bilateral dense lesions have much worse outcomes.[11]

Certain lesions occur frequently in head injury and one should be familiar with their CT appearance. Figure 1 shows an acute subdural hematoma (SDH) on the left with a large left to right shift of the ventricular system. Note that the white band of increased density extending parallel to the inner margin of the skull appears thin and not of much significance. This may prove deceiving and at surgery the hematoma is always much larger than one would expect from the scan. This effect is caused by the high density of fresh clotted blood which appears white, as does the bone, thus making it hard to differentiate between the two.

A typical epidural hematoma is seen in Figure 2 and the characteristic convex shape inward is noted. Figure 3 shows a right frontal hemorrhagic contusion. The reduction of CT scan density seen in Figure 4 probably does not represent true edema but generalized swelling secondary to increased cerebral blood flow and increased intracranial blood volume. CT characteristics are small midline ventricles and a mild generalized decrease in cerebral tissue density. These four figures represent the most common lesions seen in acute head injury.

Typical chronic subdural hematomas are seen in Figures 5 and 6. Several errors in diagnosis can occur with these lesions. As time passes following trauma, subdural hematomas liquefy, become isodense with brain and thus become invisible on CT scan. However, a large shift of the ventricles away from the lesion will be seen. In the case of bilateral chronic subdural hematomas there may be no shift of the ventricles, and if both lesions are isodense they may not be visible. Clues here are absence of sulci and small or absent ventricles in an elderly patient (in whom larger sulci and ventricles would be expected). Contrast injection may show enhancement at the subdural-brain interface. However, when any doubt exists angiography should be performed.

In the diagnosis of skull fractures and penetrating foreign bodies the skull X-ray is still the most useful diagnostic test, but even in these cases CT may provide invaluable information. Unsuspected lesions such as the left posterior-parietal hemorrhagic contusion associated with the depressed skull fracture in Figure 7 may occasionally be found and enable the surgeon to better plan his operation. Also, angiography remains the procedure of choice in demonstrating vascular abnormalities caused by injury such as traumatic aneurysms, spasm and carotico-cavernous fistula.

Common Artifacts

The most common and at the same time the most serious artifact is caused by motion of the head. This is especially apt to occur in head injury, where the patients are frequently unable to cooperate. Figure 8 shows the streaking linear artifacts caused by motion. This artifact is worse in areas where there are great differences in density, such as the base of the skull. Figure 9 shows a low posterior-fossa cut with what appears to be a cerebellar hemorrhage. This is a 66-year-old male who had a seizure, fell, striking his head, and then presented with a decreased level of conciousness and other findings consistent with a lesion in the posterior fossa. Emergency surgery revealed no abnormalities, biopsy specimens were normal cerebellum, and followup CT scan was normal. This artifact was probably produced by minimal motion and by the fact that the cut is very close to the bone—which brings us to mention certain areas where it is difficult to differentiate between an extracerebral hematoma and irregularities in bony architecture. Such regions include the floors of the anterior and middle fossae.

Motion artifact can be totally eliminated by intubation, paralysis and ventilation of uncooperative patients. Such is the value of the information yielded by the CT scan that there should be no hesitation in doing this if the physician feels that a scan is indicated. Frequently those patients will require immediate surgery or ventilation for several days, in which case intubation for CT scan is part of the treatment of these patients. Of course a physician must be present at all times to supervise patient care in the CT room.

Also, metal will cause linear defects radiating out from it and, therefore, we no longer use metal clips in cranial surgery. Finally, where two areas of greatly differing density are close together, an averaging effect may give inaccurate density readings in that area. Examples of this are a subdural hematoma appearing smaller because of its contiguity with bone or lesions adjacent to the ventricles.

Summary

At the present time, CT is the procedure of choice in the management of head injury. Not only is it as accurate and useful as the invasive neuroradiological studies of angiography or ventriculography but is safer. Characteristic CT findings in head injury have now been identified and confirmed by surgery and autopsy. Optimal management of head injury requires 24-hour-per-day access to CT facilities and awareness of common sources of error and artifacts such as those caused by motion as well as familiarity with normal CT anatomy and the usual CT findings of common intracranial lesions.[14] Finally, CT findings are not and can never be the only basis upon which management decisions are made. Neurological

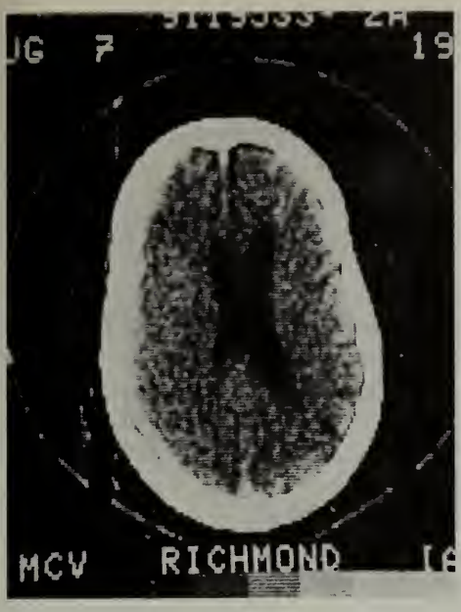


Fig. 1. Subdural hematoma (SDH).

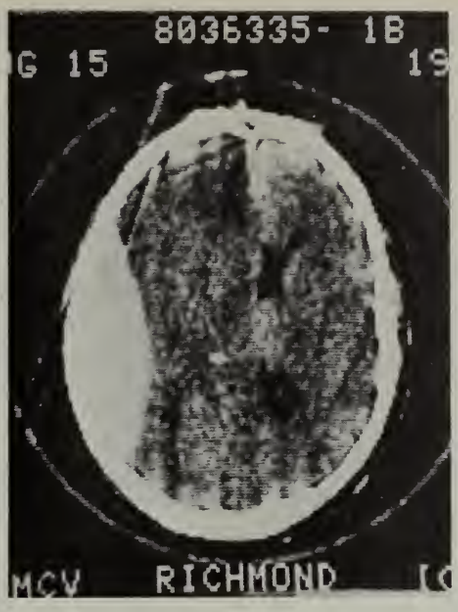


Fig. 2. Acute epidural hematoma.

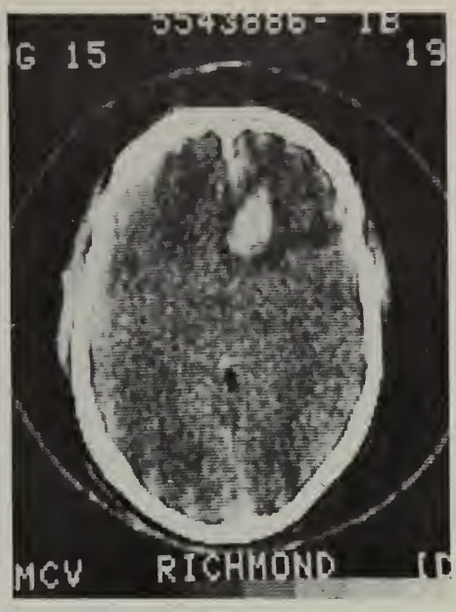


Fig. 3. Hemorrhagic contusion.

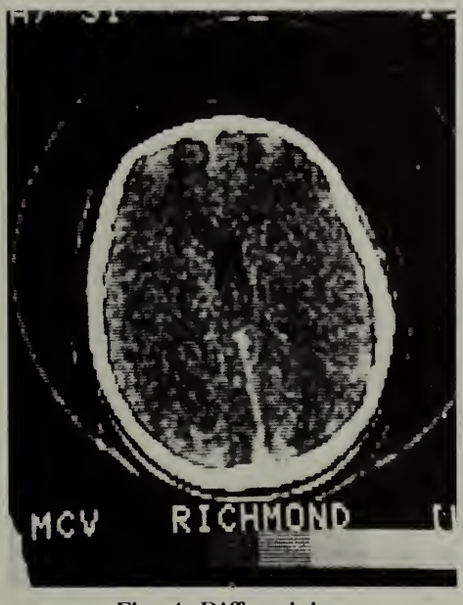


Fig. 4. Diffuse injury.

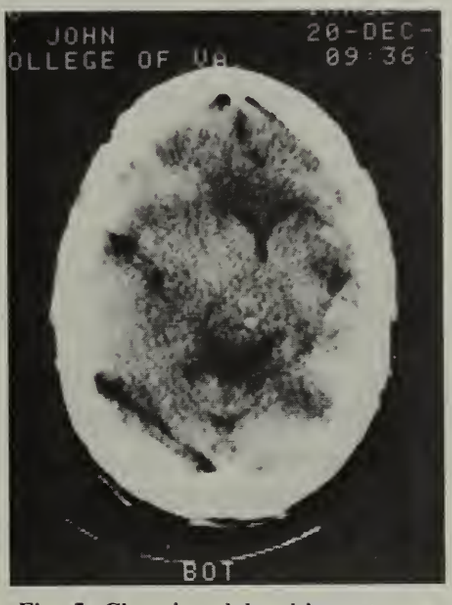


Fig. 5. Chronic subdural hematoma.

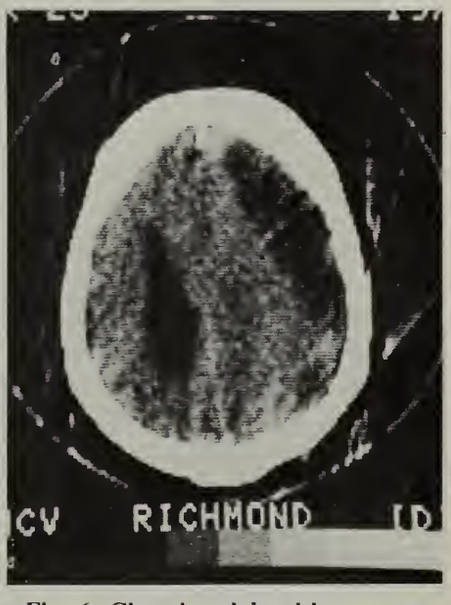


Fig. 6. Chronic subdural hematoma.

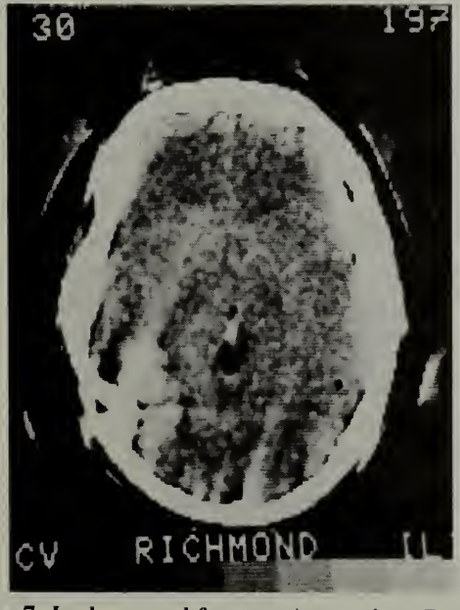


Fig. 7. L, depressed fracture/contusion; R, SDH.

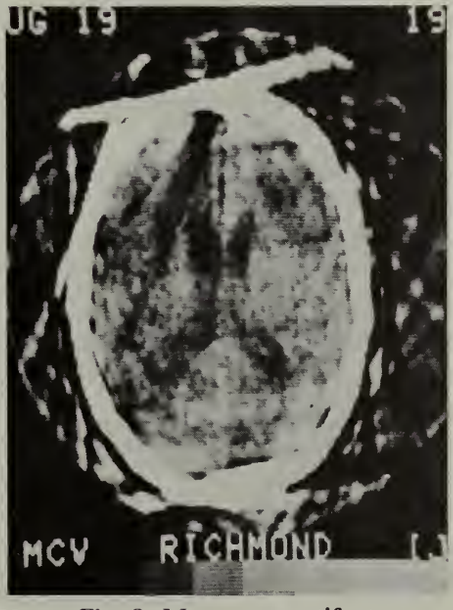


Fig. 8. Movement artifact.

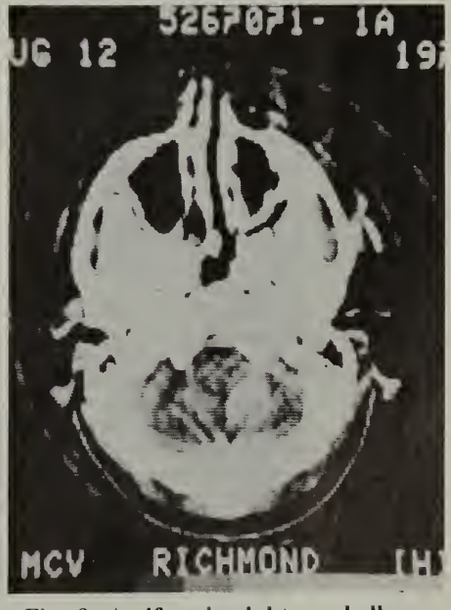


Fig. 9. Artifact in right cerebellum.

examination and intracranial pressure measurements also need to be considered. The old adage of "operating on patients and not X-rays" continues to be as relevant as ever.

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Asthma In Older Patients

John L. Guerrant, MD, *Charlottesville, Virginia*

Asthma in older patients usually is a chronic disease requiring prolonged treatment. A study of 40 asthmatic patients at a university center yields an analysis of diagnostic techniques, drug therapy and its complications, and the incidence of associated diseases.

IT HAS LONG been recognized that asthma in older patients presents characteristic features.[1] It tends to be chronic[2] and was resistant to treatment[1] until the advent of corticosteroids. It is often not possible to identify allergens as the cause of attacks.[3] It is often associated with respiratory infection[4] fatigue and anxiety[2] and other diseases.

This is a report on observations on a group of asthmatic patients age 40 or older seen at the University of Virginia Medical Center. They are representative of patients seen at the Center and were not a special study group.

Methods and Selection of Patients

The names of the patients were recorded when seen at an initial or return visit. Later the record was reviewed in detail with attention to etiologic factors, diagnostic studies, presence of other disease, good and bad effects of treatment and condition at time of last visit. A total of 117 patients were studied. There were 46 males and 71 females. In 57 the asthma began before age 40, and in 60, after the age. In 19 it began after age 60, and in six, after age 70. In 72 it had been present for 10 or more years when put into the study. In 20 it had been present for 40 or more years.

The diagnosis of asthma was considered when there was a history of episodic dyspnea and wheezing. The diagnosis was confirmed when, after a comprehensive history, physical examination and laboratory studies, no other cause could be found to explain the symptoms. The diagnostic evaluation also attempted to identify the cause of the asthma and significant associated respiratory and non-respiratory disease.

Diagnostic Studies Included:

1. History and physical examination with attention to the respiratory and cardiac systems.
2. Chest roentgenograms. The sinuses were examined in selected patients.
3. Blood counts with emphasis on total eosinophil counts.
4. Scratch and intradermal skin tests for common inhalent allergens when the history suggested atopic allergy.
5. Pulmonary functions tests were used when needed to make a diagnosis or evaluate the severity of the disease or response to treatment. Tests included the measurement of ventilatory function by spirometry or Wright Peak Flow Meter, blood gases and single breath CO diffusion. Peak flow before and after isoproterenol was measured in many patients.
6. Examination of sputum for eosinophils. Fresh sputum was examined either as a wet unstained prep-

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aration[5] or after Hansel staining (Lide Laboratories, 515 Timberwyck, St. Louis MO 63131).

7. A variety of tests to confirm other diseases suggested during the workup.

Eosinophils

Numerous reports indicate that blood eosinophilia is common in untreated asthmatics. For example, Horn et al[6] reported that nearly all of their nonsteroid treated asthma patients had total eosinophil counts of at least 350 mm.[3] Fifty of these patients had total eosinophil counts. In 20 of the 27 not on steroids and in 10 of 23 on steroids the count was greater than 350 mm.[3] Blood eosinophilia supports a diagnosis of asthma. It is not always present. It may suggest asthma and lead to an unexpected diagnosis in a patient with cough or dyspnea.

Fresh unstained sputum or Hansel stained sputum was examined in many of these patients. Eosinophils and/or Charcot-Leyden crystals were found in 70 of the 117 patients. In most of the others sputum was not examined or the patient was receiving a corticosteroid. Sputum eosinophils are unusual in patients who do not have asthma. They may be found in idiopathic pulmonary fibrosis, eosinophilic pneumonia, occasionally in chronic bronchitis and in the presence of systemic eosinophilia (Hodgkin's disease, visceral larva migrans). The asthmatic who is acutely infected may not have sputum eosinophils. They usually disappear within 24 hours after adequate corticosteroid treatment. They may persist when the asthma is well controlled with beclomethasone.

Pulmonary Function Studies

Extensive pulmonary function studies were not performed on most of these patients. They are not very helpful in differentiating asthma from obstructive airway disease. Blood gas measurements are essential for recognizing and managing the respiratory failure that occurs as a complication of asthma; 22 patients had respiratory failure manifested by Arterial Po_2 50 or less, or Pco_2 50 or more. Numerous reports indicate that improvement in ventilatory function after a bronchodilator or a normal single breath CO diffusion test are characteristic of asthma.[7] The peak expiratory flow rate was measured, using a Wright Peak Flow Meter before and after isoproterenol, in 62 of these patients. There was a 20% or greater increase in 35. The single breath CO diffusion capacity was measured in 89 patients. It was normal or greater than normal in 59. Improvement in the peak flow rate after isoproterenol or normal CO diffusion suggests that asthma rather than some other disease is the cause of airway obstruction. Neither is necessary for a diagnosis of asthma.

Etiology

It is usually not difficult to recognize that asthma is present but identifying its cause is more of a problem. There are two types of causes of asthma: the cause of "the asthmatic state" and the cause of the attacks. Common causes of asthmatic attacks are atopic allergy, respiratory infection, anxiety and nonspecific irritants.

Atopic allergy is a well recognized cause of asthma attacks. The diagnosis of atopic allergy was made when there was a history indicating that asthma or hayfever had been precipitated by exposure to a known allergen and there was also a positive scratch or intradermal skin test to the same allergen. Using these criteria 39 of these patients were allergic. In 16 atopic allergy seemed to precipitate asthma attacks after they were 40 years old. Some patients had allergic asthma when young but it no longer seemed important in the later years. Atopic allergy is an occasional cause of asthma in older patients.

Respiratory infection initiates or is associated with attacks of asthma. Infection was considered important in these patients when fever and/or purulent nasal or bronchial secretions were a part of the illness. Infection may precede and bring on an attack of asthma or it may complicate and intensify asthma

For a report on an asthma program, see page 754.

that is already present. In 63 patients respiratory infection preceded or was associated with exacerbations of asthma.

Sixty-three of the patients and their physicians thought that anxiety made their asthma worse. In many patients nonspecific factors such as irritating inhalants, fumes, temperature changes and exercise aggravated their symptoms.

There can be no doubt that atopic allergy, respiratory infection, anxiety and various nonspecific factors precipitated attacks of asthma in some of those patients. That is not the whole story. Much of the time when asthma was present none of these could be recognized. In other patients they were recognized and removed but the asthma persisted. It is apparent that something in addition to these recognized precipitants is necessary for the development of asthma. It seems to be a poorly understand condition that can be called "the asthmatic state". It has been extensively studied. Its chief characteristic is over-reactivity of the bronchi. It may be due to an abnormality of the autonomic nervous system[8] or to abnormal liberation of mediators such as histamine or slow reactive substance of anaphylaxis (SRS-A),[9] or to some other unrecognized abnormality. It must be important. It may last for the life of the patient and make continuing treatment necessary.

Associated Diseases

In addition to asthma, other respiratory diseases were common (Table 1). The discovery of a nasal polyp was occasionally the diagnostic clue that led to recognition of asthma. When polyps were present the asthma was usually persistent. Suppurative sinus infection was also common. Four patients who had inactive pulmonary tuberculosis received corticosteroid treatment. The tuberculosis did not become active.

Table 1. Associated Respiratory Disease in 96 Older Asthmatics.

Nasal polyps	36
Sinus Infection	24
Hay Fever or Non-allergic Vasomotor Rhinitis	13
Chronic Bronchitis	9
Inactive Pulmonary Tuberculosis	4
Recurrent Pneumonia	3
Pulmonary Fibrosis	2
Miscellaneous	5
Total	96

There were 129 significant non-respiratory diseases in these 117 patients before the administration of corticosteroids (Table 2). Hypertension and obesity (not included in the table) were common and made steroid treatment more difficult. Hiatal hernia was occasionally important because the associated regurgitation and aspiration aggravated cough and wheezing. The same number of cataracts were found before as after steroid use. In no case was the peptic ulcer disease made worse by steroid administration.

Table 2. Associated Non-Respiratory Disease in 129 Older Asthmatics.

Hypertension	32
Hiatal Hernia	12
Peptic Ulcer Disease	8
Psychiatric Illness	10
Prostatism	5
Cancer	6
Cataracts	3
Others	53
Total	129

Treatment

These patients were treated by many physicians. It is not possible to evaluate the effect of most modalities used. Commonly used drugs were xanthines, ephedrine, isoproternol, terbutaline, metaproterenol, isoetharine, cromolyn, corticosteroids, antibiotics. Immunotherapy therapy, surgical treatment of nasal polyps and sinus infection, psychotherapy, chest physical therapy, oxygen, and assisted ventilation were also used in selected patients. Antibiotics, essentially tetracycline or ampicillin, seemed to be effective in the presence of purulent secretions. Only one patient had found cromolyn effective enough to continue its use. Removal of nasal polyps or control of sinus infection improved nose symptoms but had little effect on the course of asthma.

Immunotherapy, which is the use of antigen injections in an effort to reduce sensitivity, was used in 55 of these patients. The records were reviewed carefully in an effort to recognize improvement that seemed to be related to starting immunotherapy but not the result of some other treatment. There were 16 patients with allergic asthma still present after age 40. Six of the 15 treated with immunotherapy improved. There were 23 allergic patients in whom the allergy did not seem to be an important cause of asthma after age 40. Three of the 17 treated with immunotherapy improved. There were 78 patients without convincing evidence of allergy; 23 of them were treated with immunotherapy but none improved. If atopic allergy is important, treatment by injections of allergy extracts may be helpful. If the presence of allergy is not supported by a positive history and skin tests, it is unlikely that injection treatment will be helpful.

A systemic corticosteroid, usually prednisone, was used in 108 of the 117 patients. The dose and duration of treatment varied greatly. Some received prednisone a few days for an acute exacerbation of asthma. In 45 patients it was used for 5 years or longer. In many patients the asthma was controlled for long periods with 5 or 10 mg of prednisone on alternate days. Others required much more. In one patient symptoms persisted in spite of 40 mg or more of prednisone most days for over eight years. Prednisone is very effective treatment and will control or markedly reduce the severity of symptoms in most patients with asthma. Steroid complications occurred in some patients. Weight gain of 10 kilo or more developed in 10, hypertension in six (32 had hypertension before steroid treatment), cataracts in three (three patients had cataracts before steroid treatment), osteroporosis and fractures in two, heart failure in two, steroid related depression or phychosis in three. Other less severe or easily controlled complications were skin infections, bruises, weakness, transient hyperglycemia.

Beclomethasone is a corticosteroid administered by nebulizer. It is poorly absorbed and free of systemic effects.[10] It was used in 95 of these patients. It was effective in many. It was not satisfactory in a few because it caused an annoying cough, because some elderly patients could not learn to use it, and because nasal polyps and intolerable nose symptoms recurred when prednisone was stopped.

Complications of Asthma

The most frequent important complication was respiratory failure (Arterial Po_2 50 or less, or Pco_2

50 or more). It occurred in 22 patients. Six of the episodes were due to steroid reduction, three to pneumonia, one to aspirin sensitivity. The cause was not identified in the others. Two patients needed assisted ventilation; both of these eventually died although one was successfully removed from the ventilator and discharged from the hospital. The other episodes of respiratory failure were controlled by aggressive treatment including IV xanthimes, epinephrine, antibiotics, O_2, and larger doses of a corticosteroid.

Cor pulmonale occurred in two patients. One was a heavy smoker and subject to recurrent respiratory infections. There was no obvious cause for the cor pulmonale in the other patient. Lung abscess developed in one patient; it responded well to treatment.

Condition at Time of Last Visit

Asthma in older patients is a chronic disease and nearly all need continuing treatment. Even most of those who experienced excellent control of symptoms on a small dose or no corticosteroid had an occasional exacerbation requiring a short period of intensive treatment. At the time of the latest visit 79 were almost well, 29 had annoying asthma, and nine were too ill to work. Three patients died. One died from unrelated cancer of the pancreas; her asthma had been well controlled. One died from recurrent respiratory failure after leaving the hospital; she had prolonged respiratory failure, cor pulmonale and assisted ventilation. The third had intractable asthma for years in spite of large doses of prednisone; a terminal episode of respiratory failure and death was precipitated by an accident and fracture.

Conclusions

Asthma is a common disease in older patients. It is often chronic and persists for many years. In most patients an accurate diagnosis can be made by history, physical examination and readily available roentgenographic and laboratory studies. Sputum eosinophilia is the most significant laboratory finding. The basic cause of "the asthmatic state" is poorly understood, but respiratory infection, anxiety and allergy are well recognized precipitating factors. It is often associated with other respiratory or non-respiratory disease. In most patients the symptoms can be controlled but prolonged treatment is needed. Complications of steroid therapy may be a problem. Respiratory failure is a threat and, when it occurs, may require large doses of a corticosteroid and occasionally assisted ventilation. Some patients remain chronically and severely ill in spite of intensive treatment. A few die from the disease.

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Wordsworth

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How I Keep From Being Conned By Drug Abusers

Duane A. Lawrence, MD, *Virginia Beach, Virginia*

As a new man in a resort area, this Virginia doctor was a patsy for the games addicts play to get drug prescriptions. What he learned can help you.

SHORTLY after I set up practice in this popular beach resort two years ago, a young man appeared in my office complaining of severe pain in his scarred right leg. He had a persistent osteomyelitis, he told me, which was slated for corrective surgery the following month in Arizona. That was his home state, he explained; he was just in Virginia Beach briefly, awaiting his forthcoming marriage to a local girl. It seems he'd run out of the Dilaudid his regular orthopedist had prescribed, and he asked if he could have a prescription for a few more pills to tide him over until he got back home.

He was well groomed and soft-spoken, and he appeared perfectly sincere. After examining him in the light of his complaints, I wrote out a prescription for 12 Dilaudid tablets. It was months later, when an inspector from the State Board of Pharmacy dropped in to question me, that I learned my Arizona "bridegroom" was a local lad; at least, he'd lived in this area long enough to have entered—and dropped out of—two local methadone clinic programs.

It was a classic "hit," as I know now. Given the current drug scene, any physician is fair game. If he's a new doctor in town, he's especially vulnerable, and if he happens to practice in a resort that's normally bustling with transients—well, he's the perfect target.

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Address the author at 4169 Virginia Beach Boulevard, Virginia Beach VA 23452.

Obviously, I filled all the requirements, and I proceeded to get hit by a number of addicts and drug peddlers. Wiser now, I've developed a set of guidelines for dealing with prescription requests from patients I'm not familiar with. It's kept me from falling for a variety of ingenious ploys that you might very well run up against in your own practice.

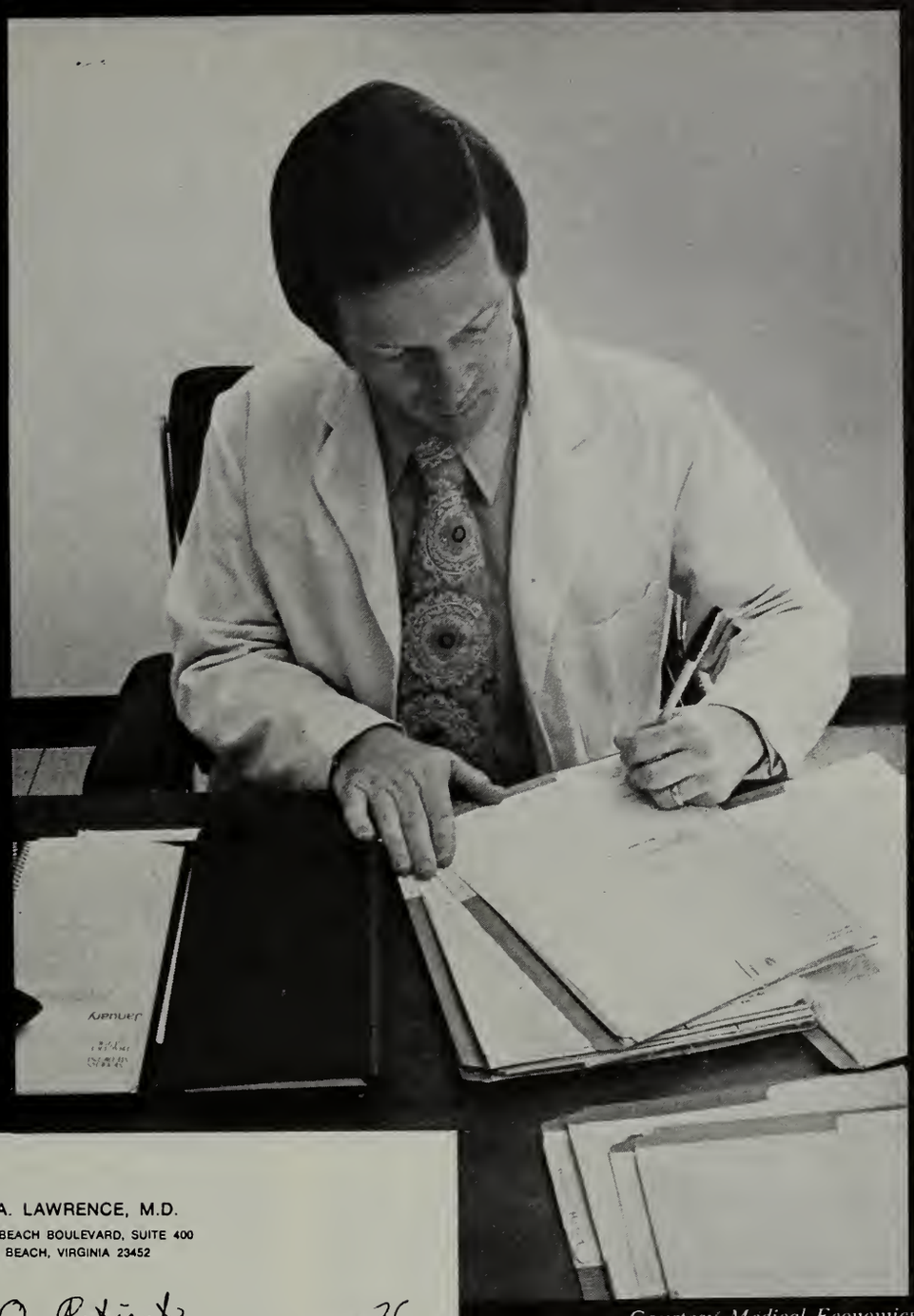
1. Watch out when a new patient asks for a specific drug. That was the tip-off I ignored in the case I just mentioned. Rather than take a chance that I'd prescribe a less potent painkiller, this "patient" worked me for *his* drug, Dilaudid. Now I'm wary whenever a new patient does his own prescribing.

The case also taught me that it's good policy to refuse self-proclaimed transients who request maintenance pain medication at the first visit. Patients with a legitimate need for such drugs usually have the foresight to secure a sufficient quantity *before* they leave home.

Along the same line, I've found that drug abusers who have chronic disabilities will play them for all they're worth, exaggerating their impairments in order to obtain strong drugs. I sense trouble, too, when a new patient tries to talk me out of the drug I do prescribe and asks for something stronger.

2. Check back on previous prescriptions. A patient first presented himself to me as a Pennsylvanian who

Maintaining full records on the patient's chart helps Dr. Lawrence to unmask drug abusers—and to defend himself if he's investigated by narcotics agents.



Courtesy *Medical Economics*

DUANE A. LAWRENCE, M.D.
4169 VIRGINIA BEACH BOULEVARD, SUITE 400
VIRGINIA BEACH, VIRGINIA 23452

TELEPHONE 486-0220

NAME John Q. Patient AGE 36

ADDRESS 1 Atlantic Ave, Va. Beach DATE 1-18-'79

℞ Valium 5mg
Disp. 30 (Thirty) tabs.
Sig. One tab. up to t.i.d. prn
tension

☒ LABEL
REFILL no (none) TIMES

D. A. Lawrence

Voluntary Formulary permitted

Dispense as written

One example of making an Rx alteration-proof: The author writes "30 (thirty)" so that an addict can't change the number 30 to 80.

had been injured in a mining accident. He was, he said, residing temporarily in this area "between operations." He unhesitatingly gave me a Pennsylvania address and telephone number, and even the name of the hospital and his orthopedic surgeon there. Taken in by his apparent forthrightness, I prescribed Demerol for him without getting back to his orthopedist. Months later, when I confronted him with contradictory information provided me by local pharmacists, he admitted concocting the story to acquire drugs.

The drug abuser counts on your not bothering to check. Now, whenever a new patient requests a controlled drug that he claims another doctor has prescribed for him, I make a point of verifying his story. If I try to call long distance and encounter the curious anomaly of a physician who isn't listed in his local telephone directory, or if the patient can't tell me who gave him his last prescription, I know all I need to know.

One well-dressed woman came in for a first office visit, and in the course of the examination she mentioned that she had trouble sleeping. When I suggested a mild sedative, she protested, "No, that's no good. The only thing that works for me is Quaalude." She told me she'd just moved from Ohio to this area, and it was her physician in Ohio who'd first prescribed Quaalude for her.

I thought it would be well to get her medical records transferred, as long as she was to be permanently in this area. But she was pretty vague about how I could reach her former doctor. "Anyway, he's retired now," she said. I gave her a prescription, not for Quaalude but for low-dosage Valium. I never saw that "patient" again.

3. Suspect all stories of lost prescriptions. Drug abusers frequently return early for a repeat prescription with stories of how they happened to lose their pills. Just last week, for instance, an apparent vacationer came in and asked me if I'd write her a prescription for her regular diet medication. Desoxyn. She'd gone sailing that afternoon and been washed overboard. "Here's all that's left of my pills," she said, holding out a plastic container filled with a soggy yellow substance. "They were in my pocket when I hit the water." I didn't bite—I'd heard that story too many times before.

You have to be skeptical, too, of tales of pills that were accidentally flushed down the commode, or were in the glove compartment of the car when it was broken into, or were sent to the laundry with the shirts. I've noticed that my regular patients have far fewer crazy accidents with narcotic drugs than my "transient" patients.

4. Beware of the "transient" who keeps coming back. Your suspicions should be aroused—as mine now are—whenever an out-of-town patient keeps reappearing once he's managed to get a prescription for a controlled drug from you. One such patient told me he was in town for a few days to attend his mother's funeral. He appeared so distraught that I prescribed a strong sedative for him. Two weeks later, he was back in the office. This time he told me he had come back to take care of his mother's affairs. He was so upset by her death, he said, that he'd doubled up on the pills and had run out of them.

I authorized a refill—but later had reason to regret my gullibility. I had a visit from an undercover agent of the city narcotics squad, who'd been keeping tabs on that young man for months. His story of a dead mother was pure fiction.

5. Have your staff alert you to possible phonies. My receptionist could have alerted me, if I had asked her, to the truth about the young man when he returned for a new supply of sedatives two weeks after his mother's "funeral." He let slip to her that he'd just visited his mother in the hospital.

The drug abuser is acting a role when he sees you, but in the waiting room his guard is down. Your staff is likely to see or hear things he won't reveal to you. I now instruct my employes to share with me such tidbits of information—even their hunches—about any unknown patients.

That paid off in the following instance. A new patient came in complaining that his kidney stone was kicking up and ruining his vacation. I took a urine specimen, but pending the analysis, I wrote out a prescription for a small quantity of Percodan. As he was leaving the office, prescription in hand, he passed another patient—also apparently a tourist—in the waiting room. My receptionist saw a conspiratorial wink pass between the two, and she immediately reported this to me. When the second patient came into the inner office, I was prepared for his story of back pain so severe that he needed "a good dose of painkiller, Doc." Obviously I'd been targeted for a "double hit."

6. Insist on seeing the patient who wants a refill. In order to make their pretended plight more believable, or to hide their withdrawal symptoms, drug abusers often send a "relative" to pick up a refill for them. One patient told me all about his forthcoming marriage on one visit and introduced me to his wife on a subsequent one. Later the woman showed up to ask for an early refill on his Talwin because he was in too much pain to come to the office himself. During a subsequent talk with the patient's mother, I learned

he was unmarried. That lie, coupled with the patient's unwillingness to appear at my office for his own medication, was damning.

7. Keep complete records—and consult them. I've learned always to record on the patient's chart the number of tablets dispensed and the dosage strength of all Schedule II, III, and IV drugs, and to check the record before giving any refills. Every entry about such drugs could have legal significance for you a year from now. If the patient gives you a tale of woe, note down some of the specifics, so that you won't be fooled twice by the same story. Without adequate records, you may find it hard to defend yourself against a charge of conspiring with drug abusers to provide them with illicit drugs.

I've learned, too, never to O.K. refills when I don't have access to my records. Addicts figure you're an easier mark when you're out of the office, so they frequently call during night hours or on weekends. And if you have coverage arrangements with other doctors, it's a good idea to reach an agreement with them that you won't refill controlled-drug prescriptions for one another's patients unless you're in a position to consult the patient's chart.

8. Answer telephone inquiries from pharmacists yourself. I instruct my staff always to put me on the phone when a druggist calls to check on whether a prescription is genuine. I once received such a call from a pharmacist located 100 miles away. He wanted to know whether I'd written two prescriptions on the same prescription blank. I hadn't of course. A patient who turned out to be an addict had added to my authentic prescription for an antibiotic his own order for 40 tablets of Demerol. Had he been successful, he would have obtained the narcotic without actually forging my signature.

Remember, there's no reason a pharmacist can't fill a prescription for a narcotic or any other controlled drug if he considers the prescription legitimate. But he may have reason to believe, for instance, that the man has been seeing several doctors and obtaining drugs from each of them. If *you* don't come to the phone when he calls your office, and an employe O.K.s the prescription, you may find yourself answering later to some investigatory body.

9. Try to make you prescriptions alteration-proof. I now write all directions for controlled medications with the amounts in numbers as well as spelled out on the "dispense" line. It's a lot harder to convert a prescription from 30 tablets to 80 tablets when it's written "30 (thirty) tablets" on the prescription blank. Similarly, when prescribing Schedule IV drugs, which can legally be refilled five times, I write "no (none) refills" in the lower lefthand corner. Otherwise, a patient could change "no" to "two" refills and triple his supply.

To discourage prescription-blank thefts, I lock up all the pads but the one I'm currently using, which I keep in my pocket—*not* out on the desk. At today's prices on the black market, these pads are a tempting target, not only to abusers themselves, but even to office custodians and new staffers lured by the prospect of easy money. As for safeguarding a rubber-stamp signature—the best way to do that, I think, is not to get one in the first place.

10. Consult with your colleagues. I occasionally check with colleagues about known drug abusers who've tried to fool *them*—we may both have been hit by the same ones. In our community, we pool our information at monthly hospital meetings. We keep each other updated on new aliases and new dodges. After all, it's a lot better to find out these things for yourself than to be told about them at a drug hearing when your license is at stake.

One young fellow visited me several times, using the same alias consistently. I discovered his real name only because he happened to be hospitalized for a bona fide illness, and his driver's license bore a different name. In our state, it's a felony to procure medication under an alias, and that brought state investigators into the picture. Their inquiry at the hospital led them to me.

We're dealing with real pros, who know they can get drugs a lot cheaper in a medical office than on the street. They're even brazen enough to call the medical society for the names of new doctors in town—doctors who aren't onto them as yet. Both addicts and drug peddlers look for unwitting M.D.s to become their suppliers. Using several aliases, a skillful pusher may hit three doctors on the same day and persuade each of them to prescribe 30 Dilaudid tablets. His capital outlay—for the office visits and the prescriptions—comes to about $50, but he can resell the 90 tablets for $15 apiece and net $1,300.

If I sound as though I see an addict or drug peddler in every patient sitting across the desk, let me assure you my wariness is based on experience. Enough of these impostors have hit my office in the two years since I came here to bring inquiries from a State Board of Pharmacy inspector, two undercover police investigators, and several lawyers representing apprehended patients. My own gullibility had put me in jeopardy. I emerged from all this questioning in the clear, of course, but I'll never take new patients at face value again.

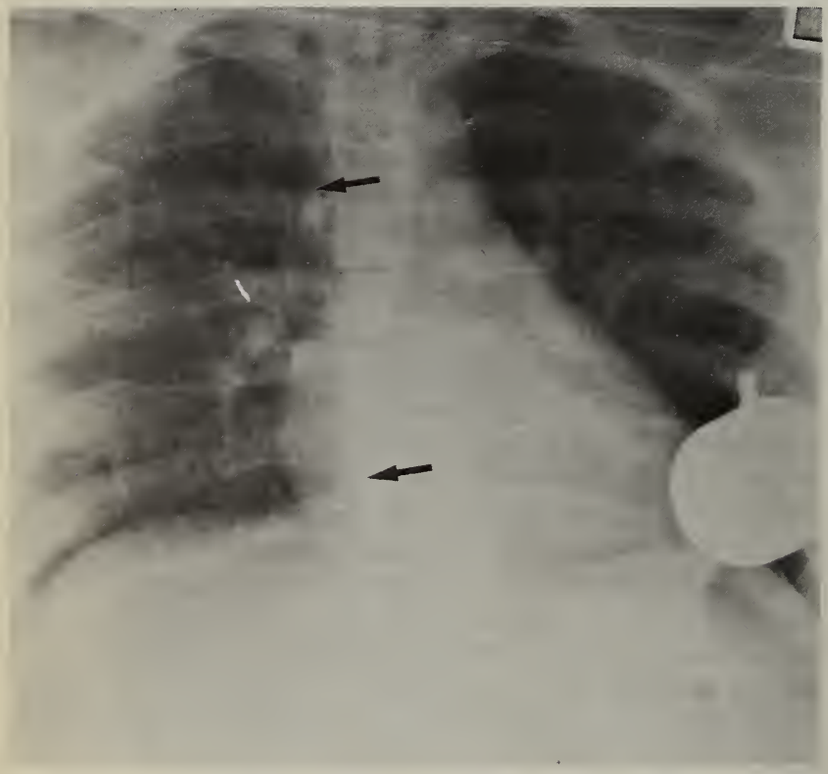
Retrieval and Manipulation of Intravascular Catheters and Foreign Bodies

Barry T. Katzen, MD, Michael H. Friedman, MD, Walter S. Choi, MD, William V. Hindle, Jr., MD, Ira J. Green, MD, and Allan Zellis, MD,
Alexandria, Virginia

NUMEROUS previous reports have described retrieval of intravascular foreign bodies using various techniques[1–4] Retrieval of these foreign bodies predominately employs standard angiographic techniques, with some variations. This report demonstrates the value of angiographic techniques both in retrieval of foreign bodies and in salvage of undesirable or improperly placed intravenous lines. Our recent experience with retrieval of a dislodged CVP catheter from the right ventricle, redirection of a ventriculoatrial shunt, and redirection of a subclavian central venous pressure line is presented.

Case 1, Figure Sequence 1 (below).

L. H. was a 25-year-old black female undergoing general anesthesia for craniotomy. Manipulation of a subclavian catheter, and subsequent removal of the catheter due to poor flow, resulted in the shearing of the distal portion of the CVP line. Since the catheter removed appeared short, a portable chest was performed in the operating room, revealing an intravascular foreign body within the superior vena cava. The patient subsequently developed multiple runs of ventricular tachyacardia and was transported to the angiographic suite. Preliminary film revealed the



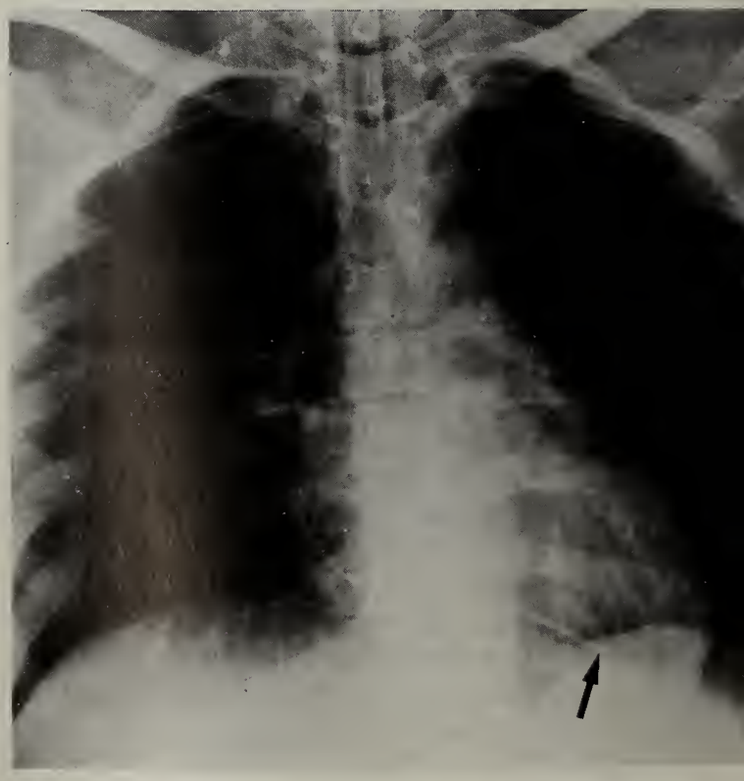


Fig 1. Sheared subclavian catheter within superior vena cava ⟶ migrates (onset of ventricular tachycardia) to right ventricle, –

catheter to have moved into the apex of the right ventricle, causing ventricular tachyardia, necessitating a Lidocaine drip. A retrieval apparatus was placed in the inferior vena cava via the right transfemoral approach, and a loop-type retrieval mechanism was employed. The catheter had subsequently migrated into the main pulmonary artery outflow tract. Following placement of the loop around the proximal end of the foreign body, the loop was tightened and the catheter segment removed, without cutdown, through the puncture site. This resulted in return to a normal cardiac rhythm, and the surgery continued uneventfully.

Case 2, Figure Sequence 2 (next page).

C. H. was a 60-year-old white male who had a ventriculoatrial shunt placed for relief of hydrocephalus. Preliminary film revealed that the distal portion of the shunt tip was curled on itself in the jugular vein.

A catheter/deflector apparatus was placed via the right transfemoral approach under fluoroscopic control. The distal end of the ventriculoatrial shunt was hooked, and straightened, to achieve a normal position.

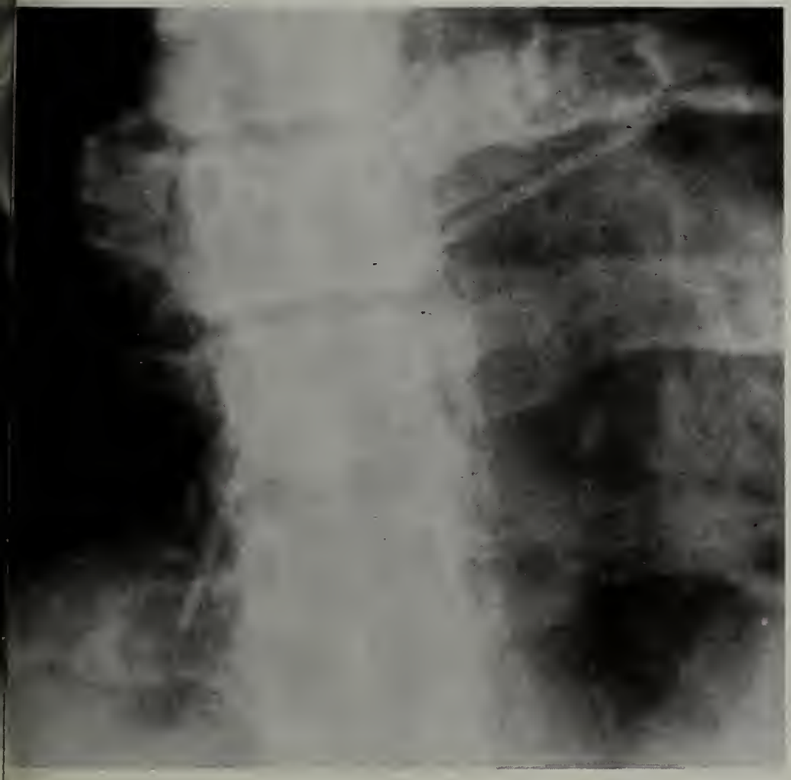
Case 3, Figure Sequence 3 (next page).

A. K. was a 57-year-old white female in whom a subclavian catheter was placed, with some difficulty, for hyperalimentation following a Whipple procedure. Radiographic confirmation of the catheter tip demonstrated the CVP catheter coursing high into the cervical region. The patient was brought to the angiography suite and a catheter/deflector apparatus was placed in the superior vena cava via the right transfemoral approach. Under fluoroscopic control, a C-shaped deflection was used to hook the CVP catheter at the site of its cephalad-directed portion. This was subsequently brought down into the inferior vena cava, and the catheter repositioned at a desired position in the superior vena cava.

Discussion

The most common cause for dislodged intravascular foreign bodies has been the improper placement of intracath lines, specifically the withdrawal of the catheter through the outer cannula, resulting in shearing of the distal segment. With greater attention to detail and selected use of the long intracath, this problem appears to be diminishing, although it does occasionally occur. Once discovered, it is extremely important that retrieval be attempted as soon as possible: prolonged delay will result in thrombus formation at the site of the intravascular foreign body and make retrieval more difficult, as well as creating a higher risk of embolus. Foreign bodies can be retrieved via angiographic techniques from almost any site in the vascular tree, and our experience has included right atrium, right ventricle and main pulmonary artery, as well as segmental pulmonary artery branches.

The potential for correction in direction of intravascular foreign bodies has not previously been em-



here it is manipulated toward pulmonary outflow tract, and ⟶



snare apparatus continues retrieval into inferior vena cava.

phasized. Particularly regarding subclavian catheter placement, repositioning may represent a significant alternative to replacement when venous lines are somewhat difficult to obtain. The morbidity of these procedures is extremely low, and no complications were noted. It is suggested that, when intravascular lines are dislodged or improperly positioned, angiographic techniques be considered to perform retrieval or proper orientation.

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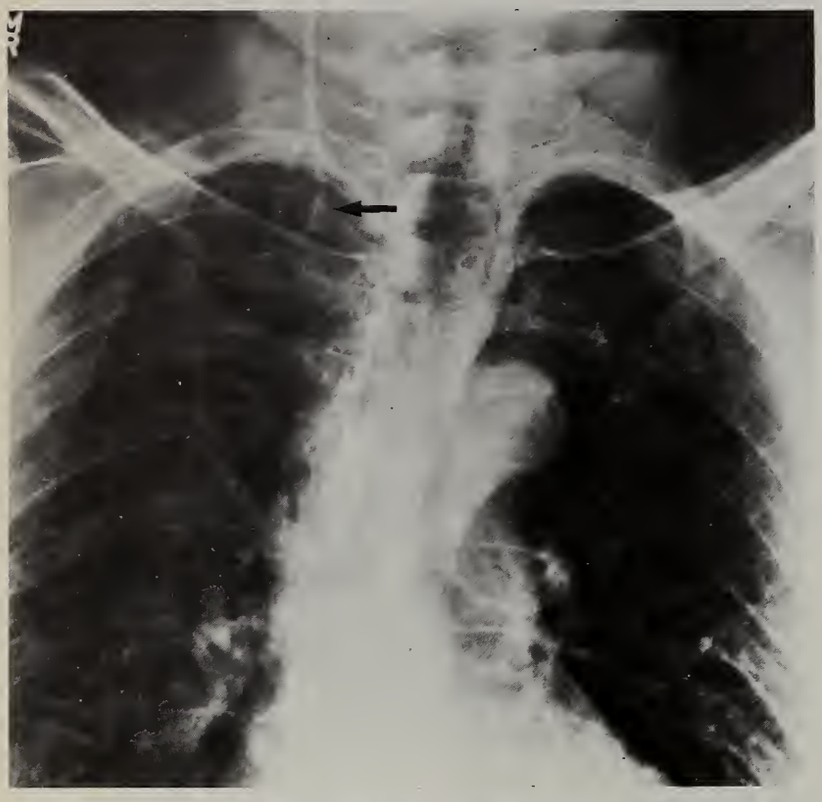




Fig. 2. End of ventriculoatrial shunt curled in jugular vein, ——→ where apparatus (via transfemoral approach) is placed cephalad

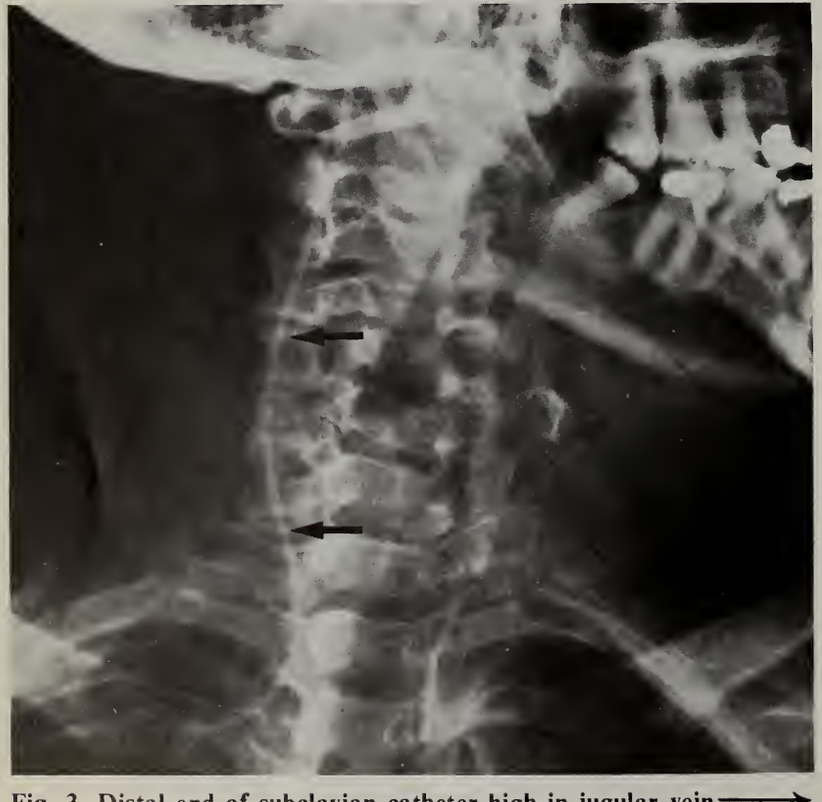




Fig. 3. Distal end of subclavian catheter high in jugular vein ——→ where apparatus is coiled around it, then brought cephalad ——

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Submitted 4-17-78.



kinked portion, then brought caudad, and ——→



straightens distal portion for free flow of cerebrospinal fluid.



bring distal portion into right atrium ——→



for final correct position after adjustment of external portion.

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Squamous Cell Carcinoma of the Foot

Joseph T. Mullen, MD, R. David Glaeser, MD, and Laura Funkhouser, BA, *Norfolk, Virginia*

The need for considering squamous cell carcinoma when diagnosing foot lesions is stressed in these two cases. Early diagnosis and treatment are the hallmarks of proper patient management.

SQUAMOUS cell carcinomas of the skin are quite common but their occurrence on the foot is rare. Because of the rarity of squamous cell carcinoma of the foot, other common cutaneous lesions are first considered in the diagnosis and a delay in diagnosis and appropriate treatment may result. While these carcinomas are not prone to metastasize,[1] they can grow to large sizes if not properly treated and amputation may then be necessary to obtain an adequate margin around extensive primary lesions.[1,2]

Squamous cell carcinoma is not always promptly recognized although guidelines to prevent delay in diagnosis have been emphasized.[2,3,4] The purpose of this report is to further focus attention on squamous cell carcinoma of the foot in order to ensure early and optimal patient management.

Case Reports

Case 1.

A 43-year-old man, a ship's welder, presented with a 3-cm ulcerated lesion in the web space of the 4th and 5th left toes. There was a surrounding area of cellulitis and marked exoriation on the adjacent dorsum of the foot. Pedal pulses were equal and bounding. There was no edema of the leg and femoral and inguinal lymph nodes were not palpable. Chest x-ray and left foot x-ray were negative.

A lesion had been present between the toes for at least one year. Self treatment with various soaks and proprietary medications had been undertaken with minimal relief. Then, however, the lesion began to enlarge and he consulted a physician who also prescribed topical medication. Eventually, the man was referred to a dermatologist who performed a biopsy, revealing a squamous cell carcinoma.

Because the cutaneous lesion extended distally on both the 4th and 5th toes as well as onto both plantar and dorsal surfaces of the foot, a transmetatarsal amputation of the 4th and 5th toes by a racquet-type incision was required to obtain adequate margins. The pathologic report described a squamous cell carcinoma, Grade 1, with adequate excision in both depth and circumference. He has returned to work and after nine months there is no evidence of recurrence, metastasis or complications.

Case 2.

A 41-year-old man, a sheet rock worker, presented with fungating, verrucose-like lesions between the 2nd, 3rd and 4th toes of the left foot. These lesions extended onto both the dorsum and the plantar surfaces of the toes and foot. The largest lesion measured 3 × 3 cm. Both left and right legs, ankles and feet were edematous. The patient was initially admit-

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Submitted 3-7-78.

ted for evaluation of the edema of the lower extremities, the cutaneous lesion of the left foot being considered a secondary problem.

The patient stated that as a soldier in 1955 stationed in a tropical climate he had experienced "itching and cracking" of the interdigital spaces of both feet and had used "foot powder" during that time. After discharge from the Army he was symptom-free until 12 months prior to admission when he noted the return of "itching" of both feet. Two months prior to admission he began experiencing ankle and pedal edema, and verrucose-like cutaneous lesions appeared between the outer toes on his left foot. Another physician, a dermatologist, treated the cutaneous lesions with griseofulvin tablets and permaganate soaks with some improvement of the cutaneous lesions. He was admitted to a hospital by another physician, a surgeon, who instituted studies to determine the cause of the edema of the lower extremities. This evaluation failed to reveal a cause for the edema. During that period another dermatologist and surgeon were consulted and biopsy of the cutaneous lesions was accomplished, revealing extensive, well differentiated squamous cell carcinoma. He was then prepared for definitive excision. Pedal pulses were present and bounding. Femoral and inguinal nodes were not palpable. Chest and left foot x-rays were negative.

Because of the extensive, wide-spread growth of the lesions in the outer three web spaces and on both dorsal and plantar surfaces of the left toes and foot, amputation of toes 2nd thru 5th with resection of their metatarsal heads was performed. The pathologic report described multicentric, well differentiated, Grade 1 squamous cell carcinoma with adequate excision in both depth and circumference. He has returned to work. The edema of the lower extremities has not yet completely subsided but after four months there is no evidence of recurrence, metastasis or complications.

Comment

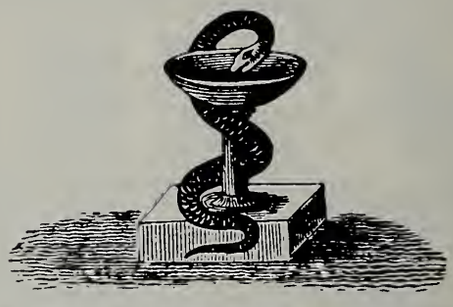
The large size and the long delay in diagnosis and treatment are the pertinent points in this discussion of squamous cell carcinoma of the foot. Obviously, early recognition and wide local excision of these lesions are the aims of proper management. Depending on size and location, amputation may be required to ensure margins free of tumor. Local recurrence following excision which had tumor at the margins is the usual outcome of such excision. While these carcinomas are not prone to metasize, metastasis does occur more commonly from those tumors which are large and have, histologically, a profusion of cell growth with extensive invasion.[1] Death from metastasis has been reported.[2]

Many specialists including podiatrists, generalists, dermatologists and surgeons, including general, orthopedic and plastic, provide foot care for patients. All must be suspicious of lesions on the foot. There should be no complacency about large, unusual or chronic lesions of the foot and early biopsy should be performed.

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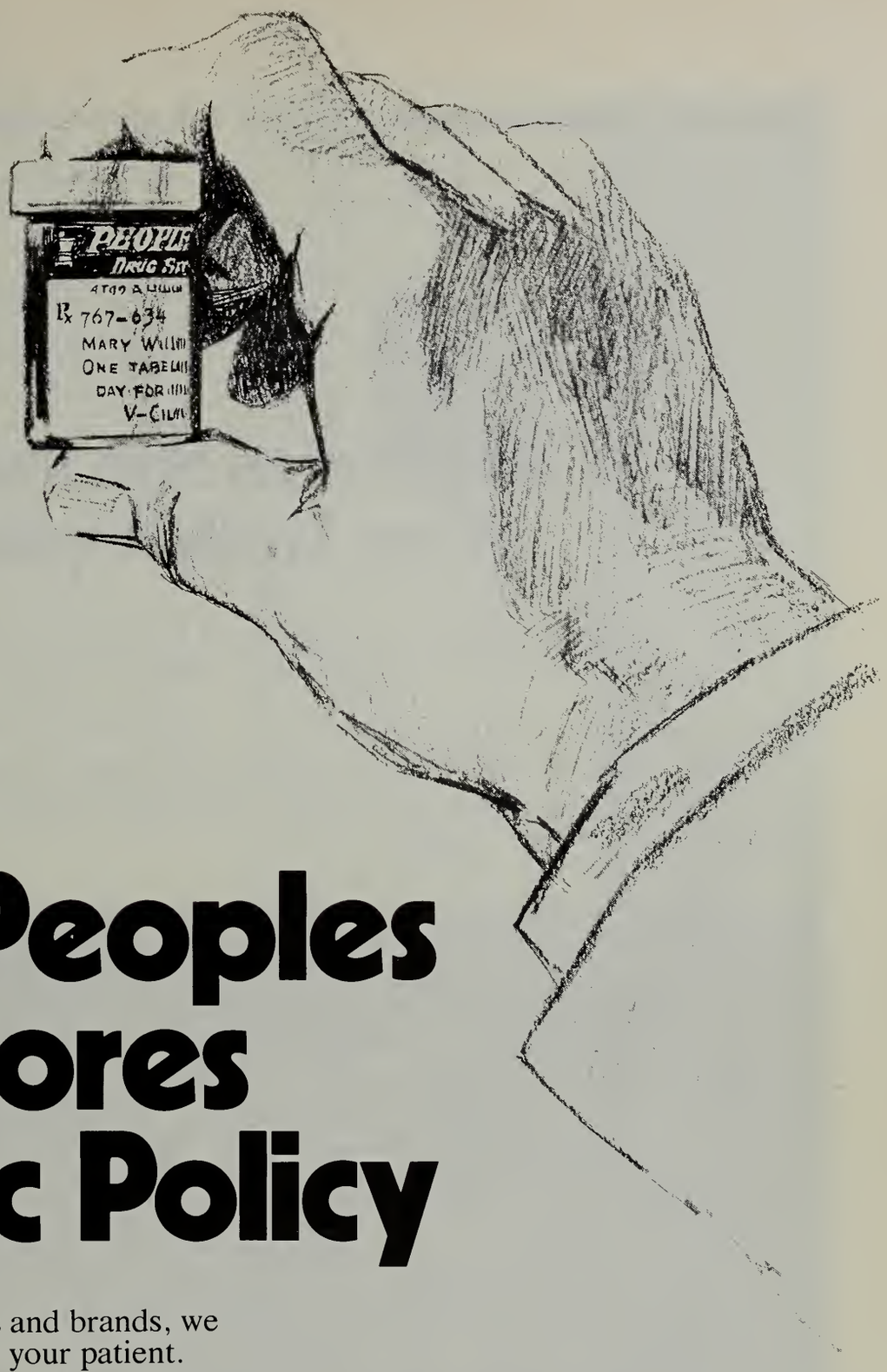
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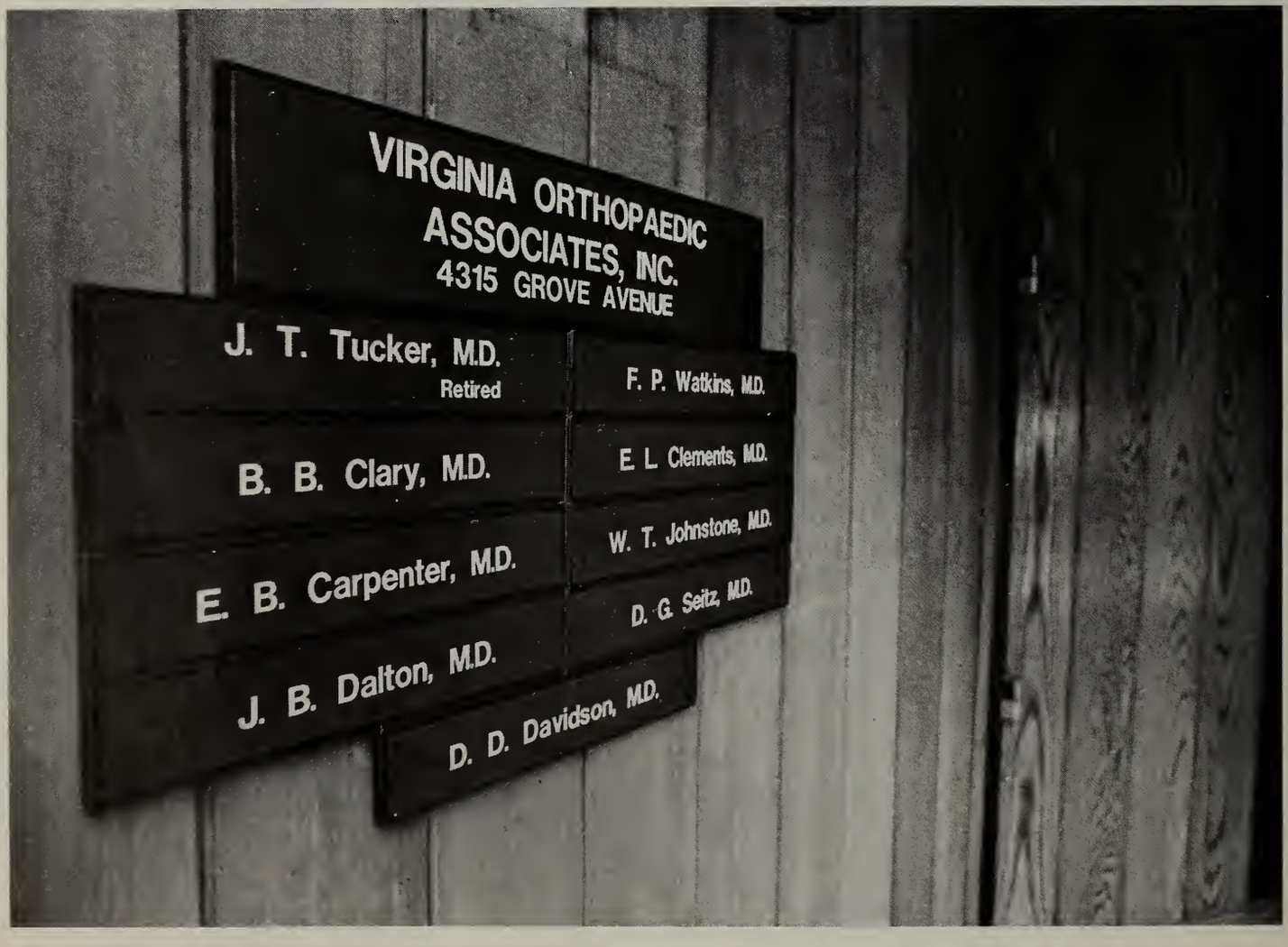
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Group Versus Solo Practice: What Are the Options?

Edward H. Achorn, MA, CPA, and Donald L. DeMuth, MBA, CPA,
Middletown, Pennsylvania

"Large corporations look to synergism as an attraction in making acquisitions. The potential medical group member should look to synergism as his reason for entering a group."



THERE ARE eight salient considerations the physician should weigh when he is choosing between solo and group practice. These apply generally to all group practice, whether partnership or corporation.

Practice Management.

A "solo" is constantly involved in the everyday headaches of running the business, whereas in a group these responsibilities are usually split. If the group is sufficiently large, it may even have a business manager assume the function.

In a solo, nobody (except the patient) tells the physician what to do; in a group, the individual physician merely suggests hours, working conditions, and rewards. If the group is to be successful, he must be subject to a concensus decision.

For a new solo to begin a practice, he will probably need capital of $20,000 plus living expenses for up to seven months. Raising this kind of money may be difficult. By entering a group as a partner or as an employee, the financial struggle of practice-building is avoided. On the other hand, the road to equality in income sharing may be long and lean. If the new group member treats more than his share of patients, he may find it frustrating.

Spare Time.

Arranging for coverage for vacations, holidays, continuing education, and sick days can be frustrating when practicing as a solo. On the other hand, as part of a group, the physician will normally know in advance when he is expected to share night calls, weekends, and holidays. Of course, as a new member he will seldom get his choice.

Socializing.

As part of a group, the physician frequently feels peer pressure to socialize as part of the group, whereas the solo will feel freer to pick his own friends. However, business pressure will require both solos and group members to do the type of socializing which fosters referrals.

Patient Care.

The solo treats his patients—their physiological problems, their personal problems. He is more familiar with their problems and treatments. He does not feel it fair to himself or to his patients when he has to correct another's mistakes. He determines the number of patients he will see per day.

Conversely, the group member may have to spend more time in reviewing patient's charts thoroughly;

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and there will be times when errors or omissions will be discovered. Likewise, his colleagues may discover his errors.

Consultation.

As a solo, the physician may choose the specialist for referral, whereas for a group member there will be strong peer pressure for referrals within the group. As a member of the group, he will usually find it more convenient to walk down the hall than to go through the formal referral procedure. Conversely, it is more likely that referrals from outside the group will be reduced.

Productivity.

In general, solo practitioners treat fewer patients per week than do members of groups. Two-man general practice groups see one-third more patients than do solos. Not surprisingly, there is a point of diminishing returns, when the number of patients seen per physician drops off as the size of the group increases. This takes place at a point somewhere above eight members.

Income.

As might be expected from the observations on productivity, income tends to increase for group practitioners as opposed to solos. In *Profile of Medical Practice '75-'76,* published by the American Medical Association, it is estimated that, for the year 1974 physicians in two-man groups produced average earnings of $61,306, while as solos their earnings were $47,229. As in productivity, the income tends to peak at a size above eight and drop off thereafter.

Liability.

While the situation will vary on a state-by-state basis, depending on whether there is a malpractice law in effect, partners are generally liable—jointly and severally—for each others' acts, while in a professional corporation that liability may be restricted to one's own acts. By all means, review this problem before becoming a member of a group. Obviously, a solo will be liable for his own acts only.

THE BASIC elements discussed above must be guaged against the specifics of the particular group practice the physician is considering. What are the possible rewards and satisfaction in *this* group practice? How can they be forecast?

Informal Sharing.

One way of testing the waters is to share any or all of the following without setting up a formal organization:

a. *Office Expense.* The arrangement could be based on a simple 50% split, on income, on usage, or on visits. To work, it should be clear and simple.

b. *Equipment Cost.* This arrangement could be based on a simple 50% split, on a percentage of use, or simply a rate for usage. The physician purchasing the equipment (avoid group purchase if testing the waters) will get the investment credit.

c. *Emergency Calls.* To meet the objective of coverage with spare time, this area should be agreeable to all. Perhaps a picking and choosing, such as is done in the football drafts, will give each a fair shot at his choice. Leave some flexibility in the plan to allow for emergencys and anniversaries.

Formal Organization.

a. *Horizontal.* Grouping with the same specialty has the advantage of common interests and abilities, thus promoting time sharing and idea comparisons. The referral process will continue for the most part as in a solo practice, as will the need to secure referrals.

b. *Vertical.* The grouping of complimentary specialties reduces the referral problem. However, it has the disadvantage of not being able to share ideas or time as well.

THERE is an axiom in business that holds equally true to medical practice. It is: "Breaking up a partnership or corporation is as traumatic as getting a divorce." To prevent such an experience, a physician considering affiliation with a group, be it a partnership or corporation, should consider the following factors.

Trust.

Will the group be operated in an atmosphere of trust? There is a need to write a thorough partnership agreement or corporate bylaws; during the life of the group, however, if reference need be made to these documents for day-to-day purposes, the group is built on sand and will ultimately crumble. The question is, "Can I trust my potential partner?" If the answer is a firm "No", discard the idea. If the answer is a question mark, but the grouping is natural, consider testing the waters by some measure of expense sharing.

Personality Compatibility.

Are the personalities of the group compatible? Can tough decisions be made with due respect for each other's feelings and integrity? This does not mean that interests are compatible; in fact, they should be complimentary, so that one may be oriented to business, one to education, one to community service, etc., with each supplementing the other. It means that there exists a feeling of true concern for the feelings and opinions of the others of the group. Once a

. . . in functional G.I. disorders*

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†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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For use as adjunctive therapy in the treatment of peptic ulcer.
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THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING CDMBINATIDNS DF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTDRS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Dbstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. WARNINGS: In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. PRECAUTIDNS: Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: autonomic neuropathy; hepatic or renal disease; ulcerative colitis–Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon; hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension; hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.
It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. ADVERSE REACTIONS: Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. DDSAGE AND ADMINISTRATION: Dosage must be adjusted to individual patient's needs.
Usual Dosage. Bentyl 10 mg. capsule and syrup: *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg.: *Adults:* 1 tablet three or four times daily. Bentyl Injection: *Adults:* 2 ml. (20 mg.) every four to six hours intramuscularly only. NDT FDR INTRAVENOUS USE. MANAGEMENT OF OVERDDSE: The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanecol chloride USP) should be used.
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question has been decided, there must be follow-through without any "I told you so's" if it doesn't go exactly as intended.

Age Compatibility.

Are the ages such that the objectives of the group are synchronized? An older physician might be less interested in building an office building. A new entrant might not have sufficient capital to invest in heavy equipment. The antithesis may be true, that the young new entrant is being groomed to replace the physician approaching retirement. Approaching retirement suggests the need for young blood. Practices that require heavy capital investment should include practitioners with similar capabilities to raise that capital.

Personal Objectives.

The obvious objective of a group is to render quality medical care. However, if one or several of the group has outside financial pressures, (children in college, heavy mortgages, etc.) it may be expected that they will be more concerned about number of visits and average fee per visit than the member who is financially secure. Others may be concerned with plant and equipment acquisition. If the income-sharing formula does not provide for these, friction and possible dissolution will result.

These are some of the factors to be examined. Life is not perfect. Nor will a potential group member come up with the perfect answers to the questions. Determine that the imperfections are acceptable in lieu of the advantages.

THE DECISION is made to go for the group. What elements should be included in the related agreements? By all means use an attorney for this purpose; ask questions, accept his advice, and understand the agreement. Try jotting down your answers to the following questions and letting your attorney play devil's advocate, thus giving you thorough insight into your future organization. Some suggestions are included.

Q. How do we share income? Many partnerships will allow interest on invested capital as well as sharing profits based on productivity. Corporations can accomplish this through base salary plus bonus. It should be remembered that an advantage of a group is that sickness or disability does not cripple the practice or the individual physician's income. Thus, while he might not expect a full income while sick, the physician should receive an adequate income. If earnings are based on revenue, consider very strongly the use of billings—not cash received—to avoid a bookkeeping bottleneck.

Q. How do we place values and/or buy out in the event of death, or break-up? Any of these situations is traumatic, and a planned solution while all are in the best of health will minimize the problems. Not only should values be established (or formulated), but the funding should be planned also. Accounts receivable must be considered as well as other assets. Treatment of these items is of considerable tax importance to both buyer and seller. In particular, the process of placing a value on a partnership has a significant tax consequence to both parties.

Q. What mechanics should be used for major decisions? The authors have heard the comment, "I'd never be a minority shareholder in a small corporation." The inference is that decisions could be ramrodded or stalemated, which could be a cause for breakup of the group. Members should have the wisdom to realize that decisions will not always go their way. Equally important, members should avoid becoming clique-ish. The essence of this question is that a tie-breaking mechanic should be provided. A professional corporation might consider inclusion of outside blood on its board of directors.

Q. How do we bring in new blood? Should we provide a test period for new physicians? Do we require an investment, or do we permit the new physician to accumulate the capital through profit sharing?

Q. In the event additional capital is required, do we assess the partners (or shareholders), or do we borrow? If we borrow, to what limit? If we assess, to what limit? As new developments occur, it is necessary to stay modern to provide the best medical care. Do we limit our liability on notes to a *pro rata* share of the liability (thus restricting our borrowing power)?

Q. Should we place limits on the outside activities of group members? Do we encourage or discourage our affiliates' involvement in labs? In PT facilities?

Q. At the outset (particularly as regards partnerships), how do we share tax credits on contributed capital? For example, a building contributed to a partnership may have a different fair market value than a tax cost (adjusted basis). Since the physician contributing will want the full credit as contributed capital, this may give rise to tax problems.

Large corporations look to synergism as an attraction in making acquisitions. The potential group member should look to synergism as his reason for entering a group. If he has the wisdom to look upon group decisions as the greatest good for the greatest number, he will find that 2 + 2 can be greater than 4, as witness the fact that group earnings and productivity are greater than solo. ■

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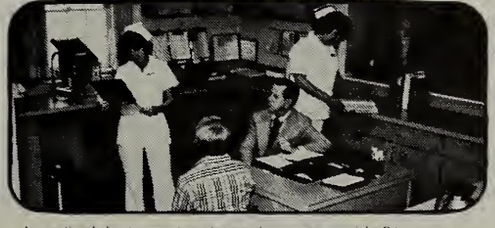
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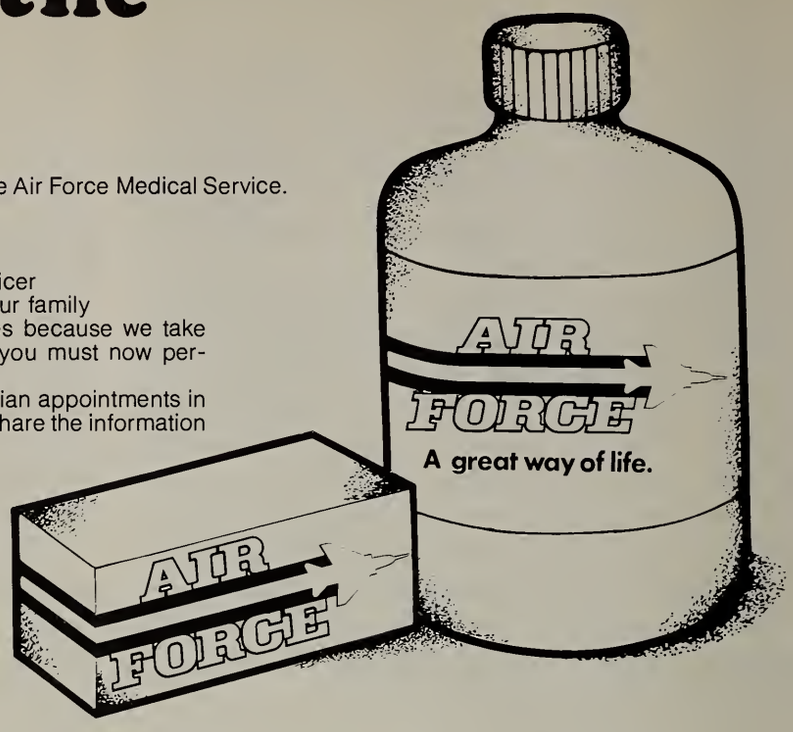
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Existence of *Sporothrix schenckii* as a Pulmonary Saprophyte. MITCHELL LOWENSTEIN, MD, SHELDON M. MARKOWITZ, MD, HARRY C. NOTTEBART, MD, and SMITH SHADOMY, PHD, *Richmond.*

A 48-year-old male custodian and part-time gardener was hospitalized for treatment of renal tuberculosis. Sputum cultures failed to reveal mycobacteria, but *Sporothrix schenckii* was isolated over an eight-month period. In the absence of clinical or roentgenographic evidence of active lung disease, we postulate the saprophytic existence of *S schenckii* in this patient's tracheobronchial tree. Recognition of this state would obviate the need for the commonly accepted therapy for pulmonary sporotrichosis, amphotericin B. Chest 73:419-421, 1978.

Parathyroid Adenoma and Previous Head-and-Neck Irradiation. STEPHEN H. SCHACHNER, MD, and ALLAN HALL, MD, *Falls Church.*

The association of tumors of the head and neck with previous radiation exposure has been well documented. Both benign and malignant neoplasms of the thyroid, brain, larynx, facial bones, scalp, and salivary glands have been reported after various latency periods.

We describe here two cases of hyperfunctioning parathyroid adenoma and relate their genesis to previous radiation therapy directed to the head and neck. Ann Int Med 88:804, 1978.

Reconstruction of the Deep Femoral Artery. SIBU P. SAHA, MD, *Charlottesville.*

This article describes the various surgical technics commonly used for reconstructing the deep femoral artery. The applicability, advantages, and disadvantages of various methods are also discussed. South Med J 70:943, 1977.

Genetic Diversity in Hemoglobins: Disease and Nondisease. ROBERT B. SCOTT, MD, and ROBERT P. GILBERT, MD, *Richmond.*

Recent mass screening programs for sickle cell trait have been the first large-scale efforts to detect potentially deleterious genes and to provide genetic counseling to healthy carriers. In these programs, the expected prevalence of sickle hemoglobin and hemoglobin C has been found, and other mutant hemoglobin genes have also been uncovered. Many of these are not associated with disease, but simply reflect normal genetic diversity. A paradox of this finding is illustrated when, in counseling, many persons demonstrate difficulty in understanding that though they have an abnormal hemoglobin gene, they themselves are not ill or abnormal. The problem's solution lies in educating both health professionals and the public so that the normal existence of considerable genetic diversity is recognized. Since every person may carry mutant genes, whether potentially deleterious or innocuous, our definition of normal must be revised. JAMA 239:2681-2684, 1978.

Comparison of Three Treatments for Fractures of the Diaphysis of the Femur. C. W. MILLER, MD, L. ANDERSON, MD, J. GROSSMAN, BA, and G. GRANT, MS, *Charlottesville.*

Sixty-eight patients with fractured femurs were studied who, in terms of personal characteristics, associated injuries and type of fracture, could have been treated by intramedullary nailing or traction followed by the application of either a spica cast or fracture brace. Twenty-eight patients actually underwent intramedullary nailing, while 18 were treated with a spica cast and 22 with a fracture brace. Multiple outcome factors were studied and, based upon every comparison, intramedullary nailing was found superior. Among those patients treated by nonoperative techniques, fracture bracing permitted earlier independent ambulation and increased the probability of normal knee motion at the conclusion of treatment. Surg Gyn Obstetr 146:572-576, 1978.

Congenital Toxoplasmosis: Chances of Occurrence in Subsequent Siblings. KAHLID J. AWAN, MD, *Norton.*

Occurrence of congenital toxoplasmosis in subsequent siblings after the birth of an affected child is discussed. Toxoplasmic retinochoroiditis was found in 3 surviving siblings. The diagnosis was made by the typical fundus lesions in children, intracranial calcification in one child, and significant positive titer for toxoplasmic antibodies in all the children and the mother, who was asymptomatic. Serology for syphilis, skin tests for histoplasmosis and tuberculosis, blood studies with sedimentation rate, and chest roentgenograms were all negative in mother and all 3 children. The view that transmission of infection from mother to the fetus may result from a chronically infested uterine wall is supported and is thought to be the probable cause in the cases reported here. After the birth of one child with congenital toxoplasmosis, the parents may be reassured about the

favorable prognosis of subsequent pregnancies with some reservation. However, it appears unwise to categorically refute the repetition of congenital toxoplasmosis in siblings. It is also suggested that because of possible danger of reactivation, the healed toxoplasmic chorioretinal lesions should be properly monitored if the patient is to be given corticosteroids for any other reason. Ann Ophthalmol 10:459-465, 1978.

Severe Electrolyte Disturbances Associated with Metolazone and Furosemide. WILLIAM D. BLACK, MD, PHILIP T. SHINER, MD, and JORGE ROMAN, MD, *Roanoke.*

In two patients with severe hypertension and moderately severe renal insufficiency, metolazone and furosemide were used in combination with propranolol, methyldopa, and hydralazine to augment control of blood pressure. This combination of diuretics also was used in five patients with refractory congestive heart failure. The patients developed severe electrolyte disturbances with a general pattern of hyponatremia, disproportionate hypochloremia, alkalosis, and hypokalemia. These abnormalities were transient in the patients with severe hypertension and moderately severe renal insufficiency. Effective long-term control of blood pressure was obtained. In the patients with heart failure, edema persisted. Due to the severity of the electrolyte derangements, metolazone and furosemide were discontinued. Because of potential untoward effects, this combination of diuretics should be used with caution. South Med J 71:380-381, 1978.

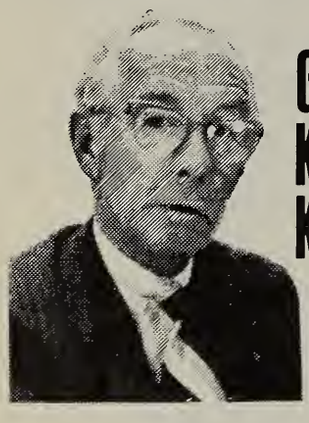
Benign Imitator. ERNEST C. LEVISTER, JR., MD, and J. PARKER CROSS, JR., MD, *Norfolk.*

Sphenoid sinus mucocele is a rare entity; there have been less than 100 cases reported in the English literature up to 1975 since the initial description by the Swedish surgeon John Berg in 1889. It is an expanding lesion with compression of the internal carotid artery, cavernous sinus, pituitary gland, and the first six cranial nerves.

We report this case to alert physicians to this impressive but benign disorder so that appropriate roentgenograms will be obtained and early otorhinolaryngologic referral made. JAMA 239:2474, 1978.

Disseminated Actinomycosis. LARRY L. LEGUM, MD, KENNETH E. GREER, MD, and STEPHEN F. GLESSNER, MD, *Charlottesville.*

A case of pulmonary actinomycosis with dissemination to skin, subcutaneous tissue, and bone is described. The cutaneous lesions were characterized by



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tender swellings and fluctuant nodules and were the presenting manifestation of the disease. Typical sulfur granules were present in the skin and pleural biopsies. Actinomyces israelii and its synergistic bacteria Actinobacillus actinomycetemcomitans were cultured from skin and pleura. Clinical improvement, with resolution of lung and disseminated skin lesions, was prompt with parenteral penicillin therapy. South Med J 71:463-465, 1978.

Hodgkin's Disease in Pregnancy. LCDR HOWARD N. SMITH, MC, USNR, and LT LYMAN SPAULDING MC, USNR, *Portsmouth.*

Two cases of Hodgkin's disease associated with pregnancies are presented. Review of the literature failed to show that pregnancy had any deleterious effect on either the course or survival of patients with Hodgkin's disease; nor did therapeutic abortion alter the survival curves of these patients. There is only one report of Hodgkin's disease metastasizing to the products of conception. Both chemotherapy and irradiation are used to treat Hodgkin's disease, and both are potentially harmful to the growing fetus. Therefore, if therapy can be delayed without detriment to the patient, it should be postponed until after termination of the pregnancy. South Med J 71:374-376, 1978. ■

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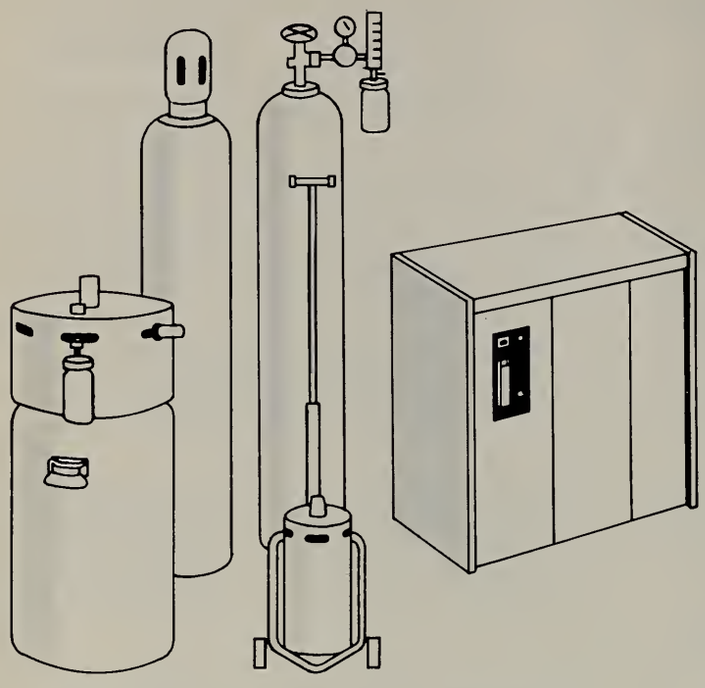
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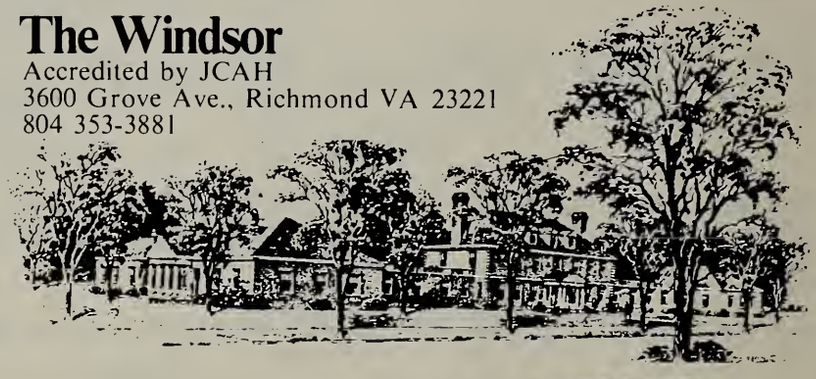
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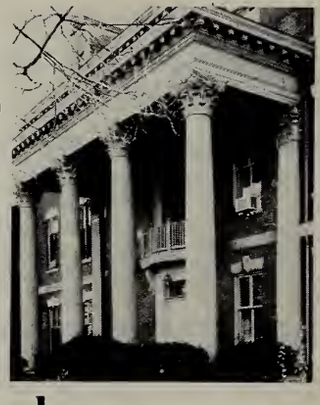
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BOOKS

The Children of Bladensfield, by Evelyn D. Ward, with an essay by Peter Matthiessen. 141 pages, illustrated. New York, Viking Press, 1978.



Virginia Historic Landmarks Commission. Photo courtesy Virginia State Library.

Virginia history comes vividly to life in this extraordinary book.

Bladensfield (right) is one of the oldest homes in Virginia, a severely plain wooden structure set in an ancient forest on the Northern Neck of Tidewater Virginia between the Potomac and the Rappahannock Rivers. Its origins are not entirely clear, though Robert Carter, of the great Virginia land-holding family, owned it in 1773. In 1842 a clergyman and schoolmaster, William Norvell Ward, and his wife settled into Bladensfield with their 12 children; one was Evelyn Ward, or "little Evie", as the family called her. When Miss Ward was an elderly woman, in the 1920's, she set down her memories of life at Bladensfield; they constitute the text of this book.

She writes through the eyes of the alert and discerning child she was, in the first person, and her memories come through with amazing freshness. We see Bladensfield full of energetic, happy children, all hands active in the business of living; Miss Ward's description of this day-to-day living is a fascinating, joyous picture of a time, a place, and a family. Then comes the War Between the States, and the reader comes to know the minutiae of wartime fear and privation for a Southern family, and the large anguish of loved ones lost, for two splendid young sons and brothers died of battle wounds. Hidden away in its forest acreage, Bladensfield was invaded by Union troops only once, but that once is excitingly told through the memories of a frightened little girl. Into the great hall the Yankee soldiers pushed, to search the house for two hidden Confederate soldiers. They were found and taken prisoner—but a package of reports for General Lee, slipped beneath a mattress, went undetected and was safely delivered. A Yankee soldier pats little Evie on the head. Oh, the disgrace of it! The little ones hanging over the garret stairway jeer, "Let a Yankee pet you!" So Miss Ward writes, with lively pictorial detail and engagingly frank sentiment.

And she has a gift for evoking marvelous images of Bladensfield's natural environment: the cathedral of trees with its choir of birds, carpet of wildflowers, offering of chinquapin nuts; the fields of wheat, corn, cotton, soy bean; the lively brook, with its gifts of clear, cool water and cress; the spring-flowering fruit trees, with their summer harvest of apples, peaches, and quince to be gathered and dried; the long winding drive through the forest, bordered by yellow mimosa that powders the children's noses on evening walks. Miss Ward's love of Bladensfield is everywhere informed by a knowledge of nature and a rare ability to communicate.

It is a short book, and at the conclusion there is an essay by Miss Ward's great-great-nephew, Peter Mathiessen, the well-known naturalist and writer. He describes Bladensfield as it is today. A grandson of the Rev. William Norvell Ward lives there now; he is William Randolph Ward, 89 years old and the last to carry the Ward name, who retired from engineering in 1950 to live at Bladensfield and do his best "to keep the place from falling into ruin." The house is painted white now, but otherwise it is as little Evie knew it, even to the attic memorablia she loved to explore.

Children of Bladensfield was on the best-seller lists for a while, and deservedly so. It is a treasure.

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VIRGINIA MEDICAL

EDITORIAL

Needed: A Stand in Favor Of Certified Athletic Trainers

AS a practicing orthopedic surgeon and high school team physician, I have become aware of the growing need for qualified health care personnel to assist high school athletic programs. Certainly today, in the state of Virginia, the high school athlete deserves properly fitted equipment, well supervised pre- and post-season training programs, adequate emergency treatment and appropriate followup care of sports injuries, including rehabilitation.

At the present time, these needs cannot be met in the traditional manner. High school coaches do not desire the added responsibilities of the duties outlined nor are they capable, for the most part, of performing these duties. Even if they were trained for them a conflict of interest might well negate their effectiveness.

The team physician, likewise, does not wish to add to his already impressive list of responsibilities and, in fact, cannot be physically present to oversee much of what is required. It may well be, for precisely this reason, that it is becoming increasingly difficult to find physicians willing to accept the position of team doctor. Physicians today are well aware that the lack of ancillary help in no way limits their responsibility or the possibility of litigation.

Thus, the solution to the problem is the addition of another individual to the high school athletes' health care team. The individual who best fulfills this job description is the certified athletic trainer.

We are fortunate in the state of Virginia to have a graduate program at the University of Virginia which is quite active in providing certified trainers. Physical therapy programs in the state and well-motivated individuals who have sought out additional experience under the supervision of certified trainers further increase the availability of qualified personnel.

The major arguments against hiring a certified trainer on the high school level are tradition and cost. However, it is not adequate to say that we do not need these individuals now because we did not have a need for them in the past. The days of fluid deprivation during practice sessions and games, running off injuries to lower limbs, and pulling on jammed fingers and injured shoulders can no longer be tolerated as satisfactory methods of care for high school athletes.

The second contrary argument, cost, is more of a problem and cannot be dealt with by the cliche, "Just what is a life or limb worth?" The fact is that it would take approximately $800 to $1300 per annum, depending on the area, to provide a stipend for a certified high school trainer. Having been a team physician with and without trainer availability, I can assure each individual high school program that this money is wisely spent. It has been my experience that total medical costs of the high school program are diminished since the trainer can prevent injuries and can treat a multitude of injuries which otherwise would require medical referral. A primary benefactor from the institution of high school training programs certainly would be the insurance companies who underwrite the cost of injuries to high school athletes. It certainly would behoove these organizations to promote the establishment of a mandatory state-wide program encouraging certification and application of high school trainers.

The Virginia Orthopedic Society has favored and prompted the concept of the certified high school athletic trainer. I feel that it is time for The Medical Society of Virginia to take a stand in favor of this concept and actively encourage its acceptance in educational circles.

S. D. BARRANCO, MD

3708 South Main Street
Blacksburg VA 24060

Photograph courtesy of Richmond Newspapers, Inc.

WHO'S WHO



ONCE AGAIN Dr. Edwin Lawrence Kendig, Jr., has, like cream, risen to the top, and this time it's quite an elevation: He is the new president of American Academy of Pediatrics, with 20,000 members over the country. This does not surprise, for he has been president of the Academy's Virginia Chapter, the Richmond and Virginia Pediatric Societies, and the Richmond Academy of Medicine.

What is surprising about all these presidencies is that Lawrence Kendig is as low-keyed and unpretentious a man as you could meet, with none of the symptoms of power hunger. What's the secret of his success?

First, he turns out the work, masses of it. He has an extraordinary knack for stripping away the non-essentials and getting to what's central. "He always looks for the large picture," is the way a peer puts it. While others are fretting over molehills, Dr. Kendig is moving mountains.

Second, he's always willing to help. Ask him to chair a committee; he may be handling a big private practice, teaching at a medical school, and editing a book, but he'll accept the request without a murmur about being busy. Solicit him to review a manuscript; again, instant acquiescence, and the job is done with an alacrity that makes him an editor's delight. Call to tell him there's a new pediatrician in town who needs referrals; the referrals are made, generously, and the young physician is invited out socially as well, to be introduced around.

Dr. Kendig has always had the ability to get a lot done. As a young man at Hampden-Sydney College, he was editor of the college newspaper, played varsity baseball, graduated magna cum laude and Phi Beta Kappa, and was awarded the Gammon Cup for outstanding character, scholarship, and athletics. Hampden-Sydney conferred an honorary doctorate of science on him in 1971; of all his honors, this is the one he cherishes most.

He went on to the University of Virginia School of Medicine, then trained at the Medical College of Virginia; Bellevue Hospital, New York; Johns Hopkins; and Babies Hospital, Wilmington, North Carolina. Everywhere his work was absolutely first-class. Johns Hopkins called him back in 1944 as instructor of pediatrics, he has been for 20 years a professor at MCV, and his appointment to the UVa Board of Visitors was extended for 11 years.

When Dr. Kendig began to practice, in 1940, he began to write, and writing became for him a career in itself. To date 71 of his medical articles have been published, nine of them in this journal, the rest in top journals in this country and abroad. The titles early on exhibited a focus on pulmonary disorders in children: tuberculosis, sarcoidosis, allied diseases. This became his particular area of clinical investigation, and so thoroughly did he pursue it that he is today an internationally recognized authority in the field; daily the calls for advice stream into his office, from physicians around the world. Now in its third edition is the book he edited and wrote many chapters for: *Disorders of the Respiratory Tract in Children* (W. B. Saunders Co., Philadelphia). He has been co-editor of another book, contributing editor to three more, and is on the editorial boards of *Pediatrics* and VIRGINIA MEDICAL.

Then there are all the appointments: chairman of the Richmond City Board of Health, member of the 1960 White House Conference, director of MCV's child chest clinic, chief of staff of St. Mary's Hospital, Richmond, where he is now director of the department of pediatrics and coordinator of hospital affiliations. Those are just a sampling.

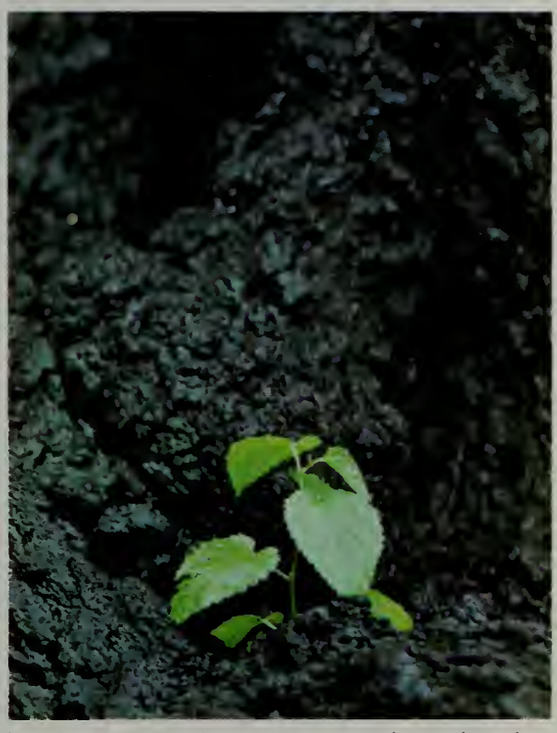
And he's a 1-man lecture circuit, speaking in such faraway settings as London and New Delhi. His speaking style is spare and to the point. There's no fat in his thinking.

There's no fat on Lawrence Kendig, either. He keeps a trim agility by playing tennis several times a week and is a fast man on the court. But he's easy and relaxed when he and Mrs. Kendig entertain in their home in Richmond's west end; in a neighborhood where the houses put on airs, the Kendig home accurately reflects its owners by being comfortably friendly, without ostentation. Two daughters of whom Dr. Kendig is dotingly fond now have homes of their own: Mrs. Anne Randolph Young, Lake Forest, Illinois, who has two daughters, and Mary Emily Corbin Kendig, Chicago.

What do Richmond's pediatricians think of Dr. Kendig's new eminence? "We're just delighted," said one. "I haven't heard a word of jealousy. Dr. Kendig is a truly remarkable man, you know."

Exactly. A. G.

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The New President Reflects on Style

A good style must, first of all be clear. It must not be mean nor above the dignity of the subject. It must be appropriate. —Aristotle[1]

MY sincere goal is to emulate the remarkable qualities of leadership demonstrated by my predecessors. This will not be easy. Those Presidents whom I have been privileged to observe closely, particularly from the vantage point of Council, have *uniformly* exhibited dedicated, energetic, innovative and scrupulously fair qualities. Many of these admirable traits are applicable also to Council. I have marveled for years at the ability of Council to satisfactorily resolve innumerable serious problems. This is all the more remarkable when one considers the widely separated geographical areas and markedly diverse personal and professional backgrounds of the councilors themselves. After a meeting of Council, I am invariably suffused with a comfortable and secure feeling as I reflect, on the homeward trip, on the events of the day. Debate may have been prolonged and occasionally somewhat heated, but almost invariably initial individual opinions initially firm give way to collective agreement. I often think that most of my colleagues are unaware and hence unappreciative of these self-effacing and diligent individuals. The trite and much abused doctor excuse of "too busy" does not apply to them.

All of the Presidents that I have known have demonstrated a certain dignity as well as warm and human qualities so necessary, but not always characteristic, of individuals in high position. On occasion, in addition to the previously mentioned traits, each has revealed a central core of controlled toughness which has often proved vital.

Beyond these essential fundamentals, present in such abundance, each has otherwise been quite different. This has been demonstrated in everything from personal attire to the amount of presidential traveling. Variety is said to be the spice of life. These

variations, often refreshing, have tended to flavor each new administration. Nowhere has there been greater variety than in their writing styles.

It has become routine for the President to have a "page" or "message" in each issue of our excellent periodical, VIRGINIA MEDICAL. Initially, this was not done on a regular basis. In recent years, however, probably resulting from escalation of the pressures on our "harassed profession", the President has felt constrained to provide pertinent information for our members. A five-year review of these columns confirms, as one might suspect, that the ominous specter of federal control and regulation has increasingly dominated presidential thought and interest. The format for these presentations has shown considerable diversity. Topics other than those dealing with bureaucratic aggressiveness have varied widely. Third-party interference, continuing medical education, the role of the AMA, and the malpractice fiasco have also had considerable priority. Presidential evaluation and opinion of these matters as well as Society position relative to them have often required that factual information be provided.

As one reviews the "stuff" (newspaper jargon) of the last five preceding Presidents, it is apparent that each had his own distinct method of presentation. I am sure that my columns will prove to be no exception. I shall attempt at times to present other topics of medical interest; sometimes philosophical, often reflective and possibly whimisical at times. Don't be surprised if some are general in scope and less strictly informative. When deemed appropriate, of course, factual material with presidential and/or Society evaluation and position will be presented.

I trust this style will prove interesting. Great literature it will not be, nor is it intended as such. In preparing these columns I shall make liberal usage of the expertise of our excellent public relation advisors, medical consultants, Managing Editor extraordinaire, and our incomparable Executive Vice-President.

Charles E. Davis, Jr., MD, President,
The Medical Society of Virginia.

1. Aristotle: Style. *In* Dictionary of Quotable Quotes. Englewood Cliffs, New Jersey, Prentice Hall, 1970, p 550

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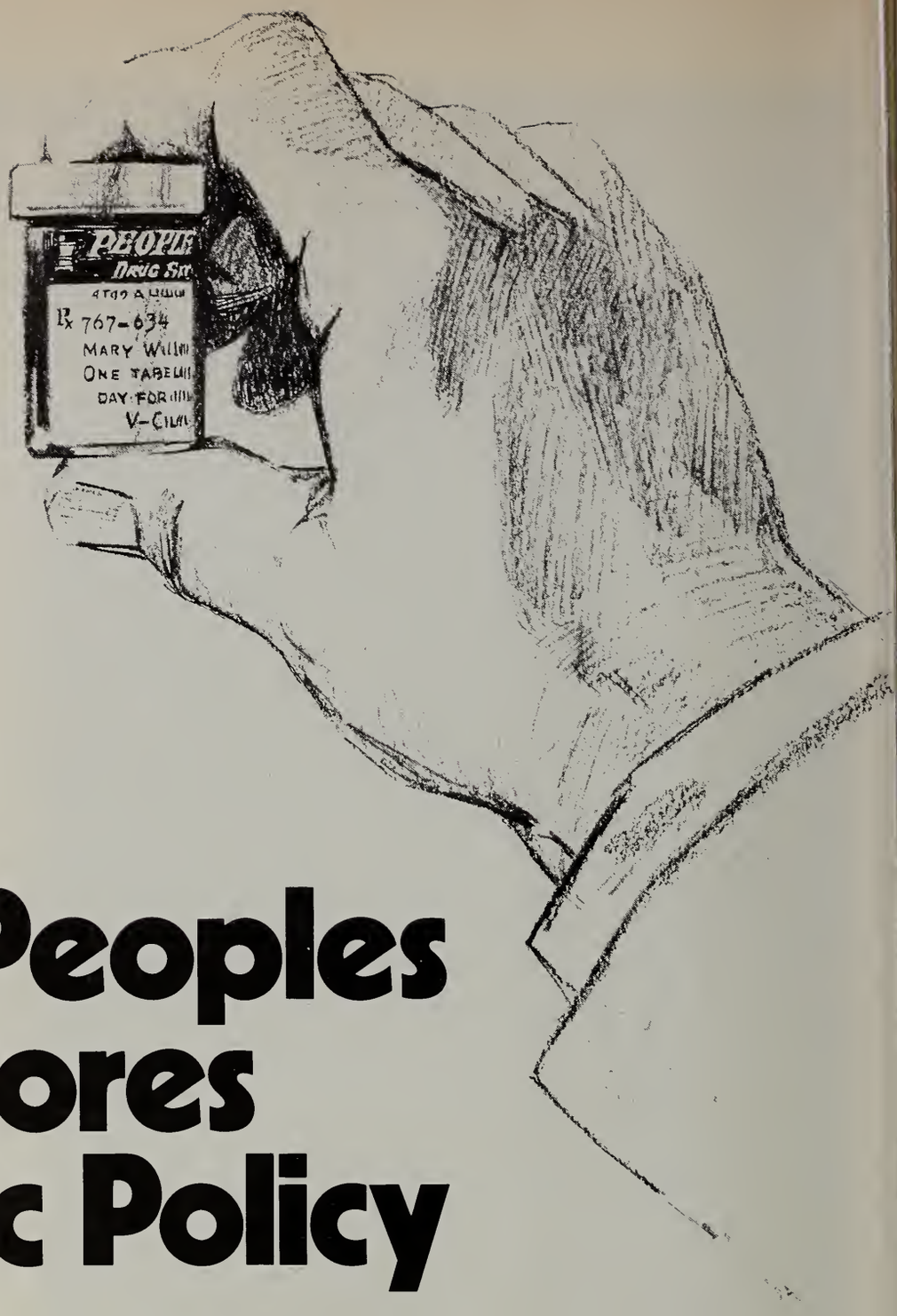
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LETTERS

President's Paragraphs Are "Heartening"

Doctor Hagood's editorial about PSROs in the August issue of Virginia Medical[1] is an excellent example of his ability to sum up a complex issue in a few paragraphs. He has correctly pointed out that the physicians involved actively in PSRO work are not adversaries to the medical profession but are actually trying to keep medical practice in the hands of medical practitioners.

I applaud Doctor Hagood's appointment of Doctor Kuykendall as the chairman of a liaison committee between the PSROs and the Society. Doctor Hagood's comments and actions are heartening to those of us who have worked in this program for the past several years, and I believe his editorial will help to dispell many of the doubts that some physicians continue to express about PSRO activities.

Robert A. Morton, MD

Medical Director
Colonial Virginia Foundation for Medical Care
160 Newtown Road, Virginia Beach VA 23462

1. Hagood WJjr: From the President: a vote for the PSRO. Va Med 105:546-548, 1978

Salute to a Nursing School

On behalf of the entire Richmond Academy of Medicine, the Board of Trustees would like to pay tribute to the many contributions made towards the care of medicine through the School of Nursing of the Johnston-Willis Hospital from 1912 to the present. This letter is prompted by the decision to close this fine school on July 1, 1980. This will mark the passing of another medical milestone in our community as the number of diploma schools dwindles markedly.

There have been 1509 graduates of the Johnston-Willis Hospital School of Nursing from 1912 to the present with many of them currently active on staffs of Richmond area hospitals.

This fine school, as well as those affiliated with Grace Hospital, St. Luke's Hospital, Stuart Circle Hospital, Retreat Hospital, Richmond Memorial Hospital, Sheltering Arms Hospital, and others, has contributed greatly to positions of leadership in Virginia and the nation, and even to international nursing care.

We wish to salute all of these fine ladies and men for their competency and compassion and for a job well done.

Robert Edgar Mitchell, Jr., MD
Chairman, Board of Trustees
Richmond Academy of Medicine
Richmond, Virginia

Welfare Medical Records Ruled Available to Clients

The United States District Court for the Western District of Virginia has ruled, in the case of McManama et al v. Lukhard et al, January, 1978, that in those situations where a welfare recipient is challenging the action of a local welfare department and has requested that a fair hearing be held, that welfare recipient shall have access to his *entire* case record for purposes of preparing for the hearing. This means that the welfare client would have access to those medical records in the possession of the local welfare agency.

Therefore, it will no longer be possible for the local welfare departments to guarantee to physicians submitting medical information to them that such information will not be shared with the welfare client. This is a significant change and Virginia physicians should be mindful of it.

Michael F. Blair

Special Assistant Attorney General
Supreme Court Building
Richmond VA 23219

Right Place, Wrong House

Enjoyed the article on Gen. Robert E. Lee in the July issue[1].

However, the picture on page 496 does not show the house General Lee died in. He lived in the house shown until May, 1869, and then moved to the present president's home at Washington and Lee University and died there some 17 months later.

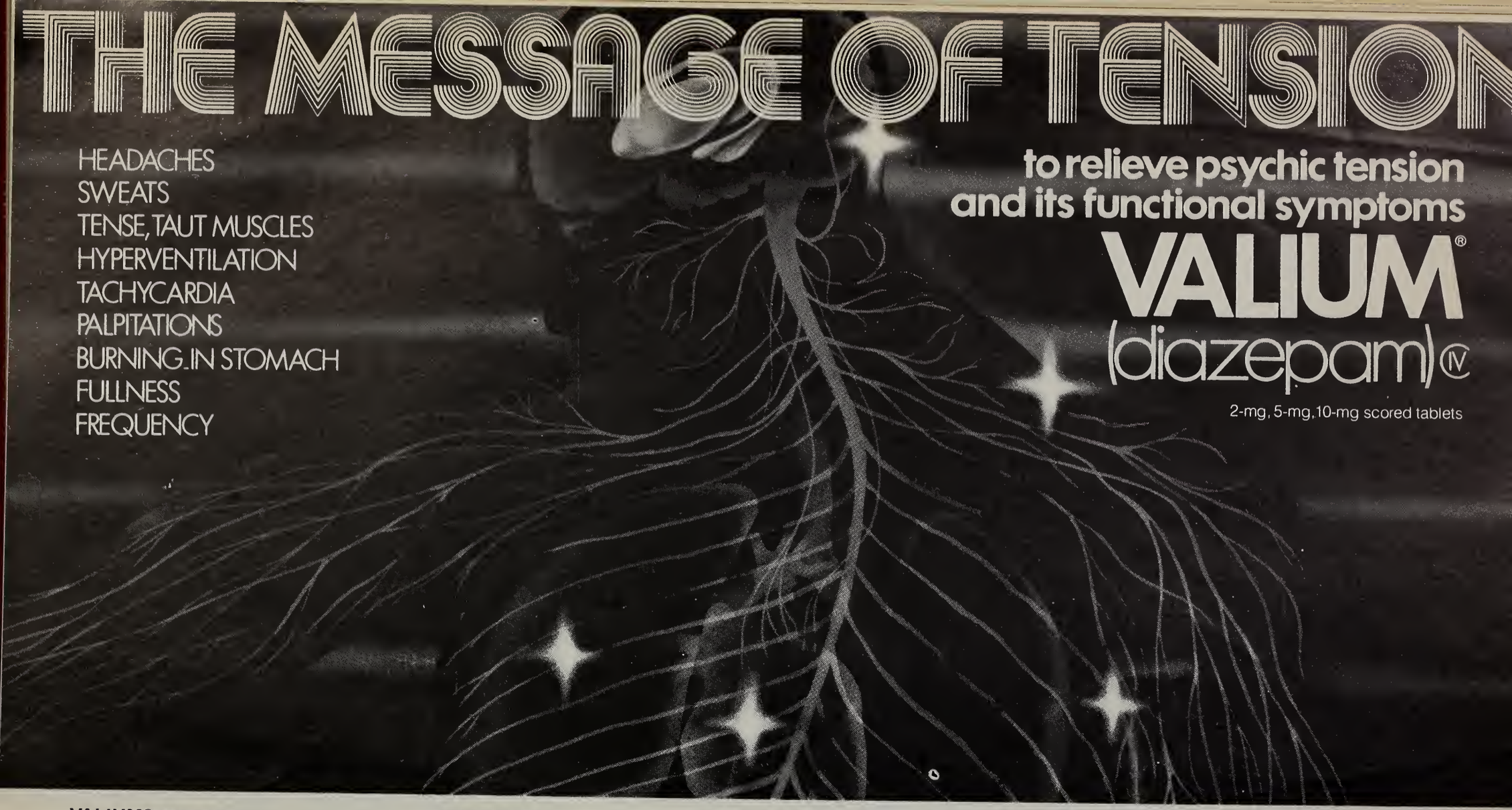
Please call this error to the attention of the author.

Echols A. Hansbarger, Jr., MD

PO Box 2548
Charleston WVA 25329

1. Riley HDjr: Gen Robert E. Lee: his medical profile. VA Med 105:495-500, 1978

Editors' response: The pictures with this article were assembled and their captions written by the Managing Editor, who greatly regrets this error.



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Before prescribing, please consult complete product information, a summary of which follows:
Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).
The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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MEETINGS ABOUT MEDICINE

JANUARY

15-18

Alton D. Brashear **Postgraduate Course in Head and Neck Anatomy** (Dept of Anatomy, MCV), **Richmond.** Dr. Hugo R. Seibel, MCV Station, Richmond VA 23298. 40 elective hours AAGP

22-26

Southern Clinical Neurological Society, Annual Meeting, Pier 66 Hotel, **Fort Lauderdale,** Dr. B. J. Wilder, University of Florida Hospital, Gainesville FL.

25-26

2nd Annual **John M. Nokes Lecture: New Developments in Diagnosis and Treatment of Gynecological Malignancies** (UVa School of Medicine), **Charlottesville.** Mrs. Mary Lou Currier, 804 924-5318.

27-31

American College of Allergists, 35th Annual Congress, San Francisco. Frances P. White, 313 447–8111.

29-February 2

Sixth Annual Neurological Update Symposium (University of Miami School of Medicine), Konover Hotel, **Miami Beach.** 6, 24, and 30 hrs. CME D23-3, PO Box 016960, Miami FL 33101, (305) 547-6716.

FEBRUARY

8-9

Treatment of the High Risk Infant (UVa Children's Rehabilitation Center), **Charlottesville.** Anne Raynor, (804) 924-5161.

17

American College of Physicians, Virginia Regional Meeting, Omni International Hotel, **Norfolk.** Edward W. Hook, MD, Box 466, UVa School of Medicine, Charlottesville VA 22901.

23-24

Virginia Chapter of the American Academy of Pediatrics, Annual Meeting, Williamsburg, Douglas E. Pierce, MD, (703) 344-9213.

MARCH

2

Law Institute on Hospitals and Medicine (MCV/VCU), **Richmond.** Mrs. Erma Blanchard, (804) 786-0496.

MARCH

4-8

Annual Radiology Postgraduate Course: Bone Radiology (MCV/VCU), Conference Center, **Williamsburg.** Mrs. Erma Blanchard, (804) 786-0496.

8

Medico-Legal Seminar (MCV/VCU and Office of Chief Medical Examiner), **Roanoke.** Mrs. Erma Blanchard, (804) 786-0496.

9-10

Gastroenterology for the Primary Care Physician (University of Maryland), **Columbia, Maryland.** Office of CME, (301) 528-3956.

19

The Team Approach to the Child with Muscular Dystrophy (UVa Children's Rehabilitation Center), **Charlottesville.**

ONE DAY SEMINAR AND WORKSHOP

on Flexible Fiberoptic Sigmoidoscopy

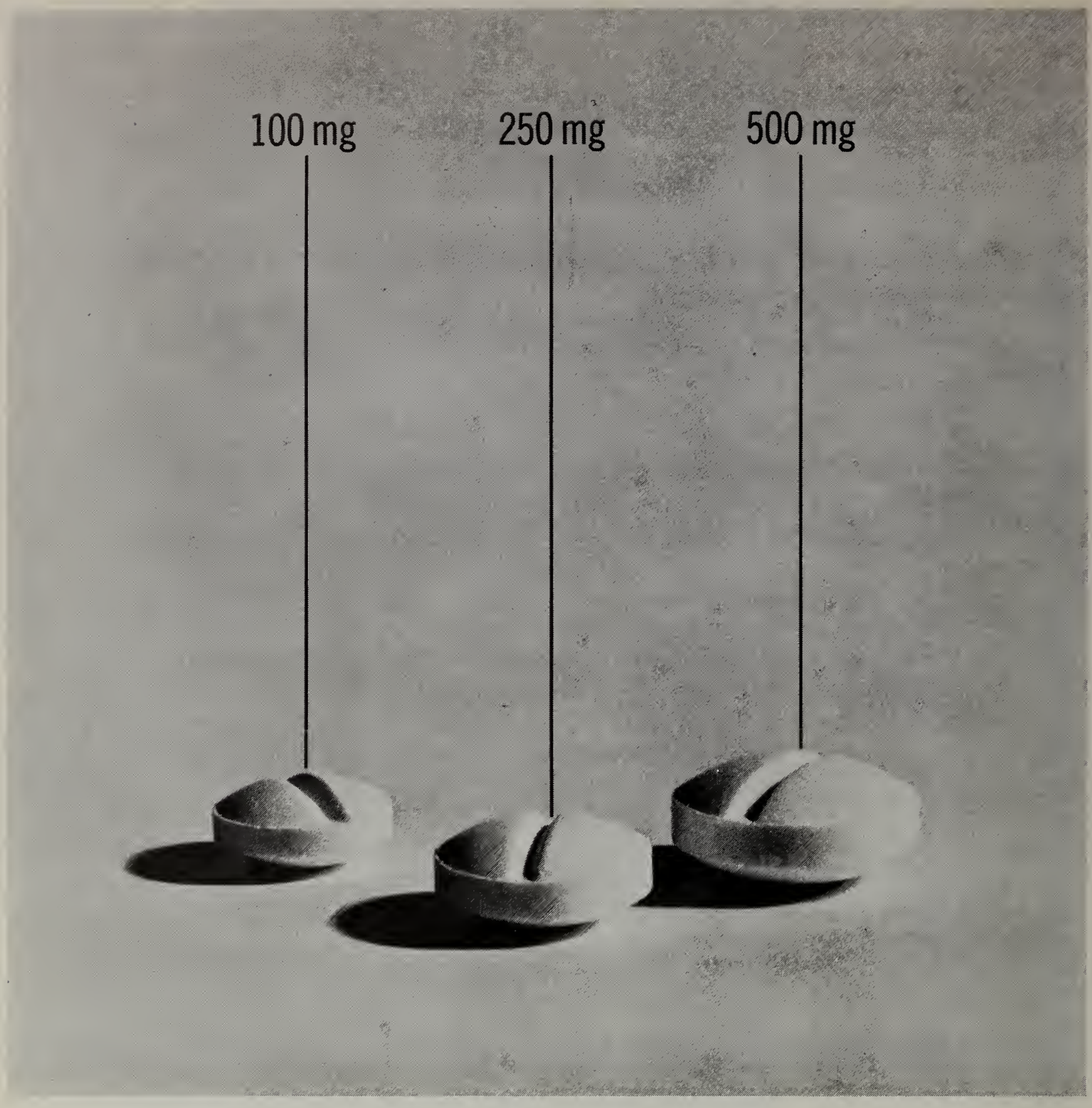
to be held at

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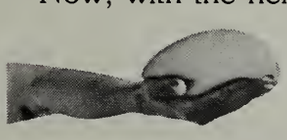
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NEW MEMBERS

MSV MEMBERSHIP PASSES 6,000 MARK

With the new members here listed, the Medical Society of Virginia's membership passed the 6,000 mark. The exact figure, as of this listing, is 6,048, and it will no doubt be even higher by the time this is printed.

The Society was founded in 1820 by a handful of Richmond physicians; there are no records to give us the number of initial members, but it is certain that those founding few would be astonished at the size of the Society today.

These new members of The Medical Society of Virginia are listed according to the component medical society that referred them for membership.

Albemarle County Medical Society:

William P. Arnold III, MD, Anesthesiology, Box 238, University of Virginia Hospital, Charlottesville VA 22903

Richard James Brewer, MD, General/Vascular Surgery, 400 Tenth St NE, Charlottesville VA 22901

Albert Boardman Butler, MD, Neurosurgery, Box 212, University of Virginia Hospital, Charlottesville VA 22908

R. Jack Eastham III, MD, Otolaryngology, 1000 E High St, Charlottesville VA 22901

Karen S. Kuehl, MD, Pediatrics, University of Virginia School of Medicine, Charlottesville VA 22901

David E. Rosenman, MD, Psychiatry, Box 378-SH, University of Virginia Medical Center, Charlottesville VA 22908

James Anderson Thomson Jr., MD, Box 203, University of Virginia Hospital, Charlottesville VA 22901

Alexandria Medical Society:

Romaldo F. X. DeSouza, MD, Pulmonary/Internal Medicine, 4801 Kenmore Ave, Alexandria VA 22314

Marc Robert Gallini, MD, Family Practice, 8228 Mt Vernon Hiway, Alexandria VA 22309

Robert Edward Greenspan, MD, Nephrology, 5249 Duke St, Alexandria VA 22304

Norman David Guthrie, MD, Psychiatry, 101 S Whiting St, Alexandria VA 22304

John Walter Klousia, MD, Urology, 823 S Royal St, Alexandria VA 22314

Michael F. Nigro Jr., MD, Surgery, 5001 Seminary Rd, Alexandria VA 22311

Allen H. Sandler, MD, Psychiatry, 218 N Lee St, Alexandria VA 22314

Steven Jay Zalcman, MD, Psychiatry, 2100 Whiteoaks Dr, Alexandria VA 22306

Arlington County Medical Society:

Manjit Rajinder Bajwa, MD, Anesthesiologist, Arlington Hospital, George Mason Dr, Arlington VA 22205

Augusta County Medical Society:

Albert Whitfield Morris III, MD, Anesthesiology, 101 Waverly Green East, Staunton VA 24401

Chesapeake Medical Society:

Eric J. Freeman, MD, Pulmonary Medicine, 4037 Taylor Rd, Chesapeake VA 23321

Culpeper County Medical Society:

Thomas F. Flaherty, MD, Gynecology, 530 Sunset Lane, Culpeper VA 22701

Danville-Pittsylvania Medical Society:

Anita Baisas Baldemor, MD, Psychiatry, 258 W Main St, Danville VA 24541

Noah Francis Gibson IV, MD, Pediatrics, 181 S Main St, Danville VA 24541

Fairfax County Medical Society:

Paul Henry Andreini, MD, Internal Medicine, 360 Maple Ave W, Vienna VA 22180

George Constantine Bazaco, MD, Pulmonary/Internal Medicine, 2697 Mattox Creek Dr, Oakton VA 22124

Robert L. Bloom, MD, Pulmonary Medicine, 1469 S 28th St, Arlington VA 22206

Volker Brandt, MD, Obstetrics/Gynecology, 8516 Leesburg Pike, Vienna VA 22180

William Michael Cassidy, MD, Pediatrics, 2327 Hunters Woods Plaza, Reston VA 22091

Byron Stanley Cooper, MD, Pulmonary/Internal Medicine, 8320 Old Courthouse Rd, Vienna VA 22180

Jack M. Costa, MD, Dermatology, 9926 Main St, Fairfax VA 22031

Aaron Stephen Dubansky, MD, Pediatrics, 8996 Burke Lake Rd, Burke VA 22015

Eileen Josephine Duffy, MD, Psychiatry, PO Box 96, Dunn Loring VA 22027

Gerard Anderson Engh, MD, Orthopaedic Surgery, 2465 Army Navy Dr, Arlington VA 22206

Leonard Stephen Fischer, MD, Internal Medicine, 1529 Chatham Colony Ct, Reston VA 22090

Paulo E. Franco, MD, General Surgery, 8318 Arlington Blvd, Fairfax VA 22031

Robin Ira Goldenberg, MD, Pediatrics, 2230 S Randolph St, Arlington VA 22204

Federico Carlos Gonzales, MD, Internal Medicine, 4645 Seminary Rd, Alexandria VA 22304

Elaine R. Green, MD, Psychiatry, 6339 Hillary Ct, Alexandria VA 22310

Robert Waring Gurney, MD, Dermatology, 11250 Roger Bacon Dr, Reston VA 22090

Stephen G. Harrison, MD, Pediatrics, 5708 N 11th St, Arlington VA 22205

Howard A. Heit, MD, Gastroenterology, 8316 Arlington Blvd, Fairfax VA 22031

Bernardo Hirschman, MD, Psychiatry, 8318 Arlington Blvd, Fairfax VA 22031

Carol E. Kennedy, MD, Internal Medicine, 4616 Ravensworth Rd, Annandale VA 22003
Homer Ellsworth Knudson, MD, Obstetrics/Gynecology, 8320 Old Courthouse Rd, Vienna VA 22180
Paul Howard Kravitz, MD, Dermatology, Comstock-3867 Wilcoxson Dr, Fairfax VA 22031
Francis P. LeBuffe, MD, Psychiatry, 404 E Broad St, Falls Church VA 22046
Charles Stuart Lefton, MD, Orthopedic Surgery, 307 Maple Ave W, Vienna VA 22180
Bruce Edward Lessin, MD, Internal Medicine/Nephrology, 1313 Dolley Madison Blvd, McLean VA 22101
Dertad Manguikian, MD, Ophthalmology, 504 Elden St, Herndon VA 22070
Curtis A. Ngau, MD, Plastic Surgery, 8330 Old Courthouse Rd, Vienna VA 22180
Vincent A. Policelli, MD, Obstetrics/Gynecology, 10028 Garrett St, Vienna VA 22180
Monira K. Rifaat, MD, Pathology, 8118 Good Luck Rd, Lanham MD 20801
Ann Romatowski Rochmis, MD, Psychiatrist, 8301 Arlington Blvd, Fairfax VA 22031
Edmond Rodriguez, MD, Immunology/Allergy, 9625 Surveyor Ct, Manassas VA 22110
Myron Alan Shoham, MD, Gastroenterology, 360 Maple Ave W, Vienna VA 22180
James Norton Sipes, MD, Cardiology, 2946 Sleepy Hollow Rd, Falls Church VA 22044
Arie N. Snir, MD, Obstetrics/Gynecology, 8516 Leesburg Pike, Vienna VA 22180

Fauquier County Medical Society:
Joseph G. Servideo, MD, Family Practice, PO Box 337, Marshall VA 22115

Fredericksburg Medical Society:
Romualdo R. Dator, MD, General Practice, 925 Prosperity Ct, Fredericksburg VA 22401
Paul Forrest Hine, MD, Pathology, PO Box 1647, College Station, Fredericksburg VA 22401
Robert Brown Vranian, MD, Cardiology/Internal Medicine, the Pratt Clinic, Fredericksburg VA 22401

Hampton Medical Society:
Brian Robert Donaldson, MD, Aerospace Medicine, PO Box 7437, Hampton VA 23666
Giacomo A. Ricciarelli, MD, General Surgery, 4000 W Mercury Blvd, Hampton VA 23666
Parker Rea Stokes, MD, Family Practice, 2017 Cunningham Dr, Hampton VA 23666
Joseph Lawson Ward, MD, Family Practice, 2017 Cunningham Dr, Hampton VA 23666

Halifax County Medical Society:
William Allen Fuller Jr., MD, General Surgery, Fuller-Roberts Clinic, South Boston VA 24592

Hanover County Medical Society:
Paul Arthur Schlein, MD, Pediatrics, 4007 Mt Vernon St, Richmond VA 23227

NEW MEMBERS

Loudoun County Medical Society:
Randall L. Harrington, MD, ENT, 11 W Market St, Leesburg VA 22075

Louisa County Medical Society:
Jorge T. DeSantos, MD, General Surgery/Gynecology, Louisa County Medical Center, Louisa VA 23093

Lynchburg Academy of Medicine:
James M. Cox, MD, Internal Medicine, 1900 Tate Springs Rd, Lynchburg VA 24517
Robert Earl Kenyon, Jr., MD, Internal Medicine, Route 1, Box 330, Madison Heights VA 24572
James Wilson Sublett Jr., MD, Anesthesiology, PO Box 2619, Lynchburg VA 24501
Charlie M. Suttenfield, MD, Ophthalmology, 2121 Wards Rd, Lynchburg VA 24502
David Allen Vaughan, MD, Internal Medicine, 2011 Tate Springs Rd, Lynchburg VA 24501

Norfolk Academy of Medicine:
Michael Clarence Blake, MD, General Surgery, 5440 Argall Crescent, Norfolk VA 23508
Harvey E. Butler, MD, Urology, 803 Medical Tower, Norfolk VA 23507
Jacob R. Drucker, MD, Urology, 509 DePaul Medical Bldg, Norfolk VA 23505
Jonathan Oliver Lee, MD, Psychiatry, Pembroke Four, Virginia Beach VA 23462
Robert Jay Pariser, MD, Dermatology, 916 Winthrope Dr, Virginia Beach VA 23452
James Chaney Raff, MD, Pediatrics, 2619 Somme Ave, Norfolk VA 23509
Josefino Santos Santos, MD, Internal Medicine, 7452 Tidewater Dr, Norfolk VA 23505

Northern Neck Medical Society:
Alexander D. Crosett Jr., MD, Radiology/Nuclear Medicine, PO Box 1221, Kilmarnock VA 22482
Carroll Francis Hamill, MD, Industrial Medicine, PO Box 258, Kilmarnock VA 22482
Charles Daniel Price III, MD, Cardiology/Internal Medicine, PO Box 1227, Kilmarnock VA 22482

Northern Virginia Medical Society:
John H. Armstrong, MD, Internal Medicine, 2132 Lavnchris Dr, Winchester VA 22601
Gian Battista Antonio Caggiano, MD, Emergency Medicine, 415 W Monmouth St, Winchester VA 22601
Randolph Page Johnston, MD, Psychiatry, 133 S Braddock St, Winchester VA 22601

cont'd next page

NEW MEMBERS

Northern Virginia Medical Society continued:

Regina E. Karmy, MD, Obstetrics/Gynecology, 414 Jackson St, Woodstock VA 22664

Robert John Karmy, MD, Obstetrics/Gynecology, 414 Jackson St, Woodstock VA

John James Marino, MD, Anesthesiology, 706 Academy Circle, Winchester VA 22601

Thomas Earl Patteson III, MD, Internal Medicine, 934 St John's Wood Dr, Richmond VA 23225

Daniel Charles Schiavone Jr., MD, Pediatrics, 104 W Boscawen, Winchester VA 22601

Ward Pierman Vaughan, MD, Obstetrics/Gynecology, 110 W Cork St, Winchester VA 22601

Patrick County Medical Society:

Robert R. Bowman, MD, General Practice, Stuart Clinic, Stuart VA 24171

Portsmouth Academy of Medicine:

Joseph Willett King, MD, Child Psychiatry, 301 Fort l ane, Portsmouth VA 23704

Leycester Owens Jr., MD, Cardiovascular/Thoracic Surgery, 3315 County St, Portsmouth VA 23707

Gloria Balcorta Villanueva, MD, Pediatrics, 333 Green St, Portsmouth VA 23704

Prince William County Medical Society:

Roy Robert Cioletti, MD, Pediatrics, 9625 Surveyor Ct, Manassas VA 22110

Frederick W. Parker III, MD, General Practice, 8245 Sunset Dr, Manassas VA 22110

Richmond Academy of Medicine:

Edmund F. Ackell, MD, Maxillofacial Surgery, 910 W Franklin St, Richmond VA 23220

Ossama Al-Mefty, MD, Neurosurgery, 7601 Forest Ave, Richmond VA 23229

Terry Gene Arnold, MD, General Practice, 1117 Westbriar Dr, Richmond VA 23233

Kathleen Angela Brosnan, MD, Psychiatry, 7831 Burrundie Dr, Richmond VA 23225

Bron Burwell, MD, General Practice, PO Box 8743, Richmond VA 23226

Jen-Wen Chen, MD, Anesthesiology, 2710 Kenbury Rd, Richmond VA 23225

Harry Watkey Easterly III, MD, General /Vascular Surgery, 1805 Monument Ave, Richmond VA 23220

Frederick Stephen Fogelson, MD, Orthopedic Surgery, 7601 Forest Ave, Richmond VA 23229

Ralph Edward Gaskins Jr., MD, Emergency Medicine, 2635 Traymore Rd, Richmond VA 23235

cont'd on page 835

Tenuate® ℞
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION
Brief Summary
INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.
CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).
WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy*: Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children*: Tenuate is not recommended for use in children under 12 years of age.
PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.
ADVERSE REACTIONS: *Cardiovascular*: Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System*: Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal*: Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic*: Urticaria, rash, ecchymosis, erythema. *Endocrine*: Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System*: Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous*: A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.
DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in midevening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.
OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

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NEW MEMBERS

Richmond Academy of Medicine continued:

William D. Henceroth II, MD, Orthopedic Surgery, 2222 Monument Ave, Richmond VA 23220

Richard Leo Keenan, MD, Anesthesiology, Box 878, MCV Station, Richmond VA 23298

Daniel Edward Kowler, MD, Psychiatry, 1805 Monument Ave, Richmond VA 23220

Michael David Mandel, MD, Internal Medicine, 5855 Bremo Rd, Richmond VA 23226

Charles Henry Robertson Jr., MD, Pulmonary Medicine, 5855 Bremo Rd, Richmond VA 23226

Barry Edward Roper, MD, Ophthalmology, 1000 W Petty Ct, Midlothian VA 23113

Jaime Tisnado, MD, Radiology, Box 728, MCV Station, Richmond VA 23298

Nicolas Paul Tulou, MD, Internal Medicine, 2012 Monument Ave, Richmond VA 23220

George Dennis Vaughan, MD, General Surgery, 9912 Drouin Dr, Richmond VA 23229

Nestor Claudio Vozza, MD, Psychiatry, 603 W Grace St, Richmond VA 23220

James Peter Wigand, MD, Internal Medicine/Endocrinology, 317 Chasnell Rd, Richmond Va 23235

Claude Watson Wilson, MD,Neurosurgery, 7702 Parham Rd, Richmond VA 23229

Roanoke Academy of Medicine:

William Wyatt Hoback, MD, Surgery, 3505 Farmington Dr SW, Roanoke VA 24018

Marvin E. Perkins, MD, Psychiatry, Route 2, Box 309, Fincastle VA 24090

Southside Virginia Medical Society:

Benjamin Harrison McIlwaine, MD, Family Practice, Route 1, Box 1-W, Sutherland Va 23885

Southwestern Virginia Medical Society:

Richard L. Robertson, MD, Internal Medicine, 116 Third Ave, Radford VA 24141

Kazimierz M. Sowinski, MD, General Practice, Radford Community Hospital, Radford VA 24141

Richard Eugene Townsend, MD, Family Practice, 328 Panorama Dr, Marion VA 24354

Lawrence Rowe Whitehurst, MD, Family Practice, 300 Hughes Dr, Redstone Arsenal AL 35808

Tazewell County Medical Society:

Buenaventura S. Realica, MD, Emergency Medicine, 200 Washington Sq, Richlands VA 24641

Tricounty Medical Society:

Hossain Esmaili, MD, Anesthesiology, PO Box 149, Franklin VA 23851

Bryan D. Spader, MD, Psychiatry, 105 Southampton Medical Bldg, Franklin VA 23851

Miley Wesson Walker, MD, Urology, 707 Gittings St, Sufolk VA 23434

Williamsburg-James City County Medical Society:

Nazir Ahmad Chaudhary, MD, Psychiatry, 2324 Mountainbrook Dr, Richmond VA 23233

Richard Braxton Theis, MD, Family Practice, 132 John Tyler Hiway, Williamsburg VA 23185

Wise County Medical Society:

Guillermo J. Barrera, MD, Urology, Wise Clinic, Wise VA 24293

Robert H. Cullen, MD, General Practice, Main Street, Pound VA 24279

William Alvin Davis, MD, General Practice, Drawer T, St Paul VA 24283

T. K. Partha Sarathy, MD, General Surgery, Big Stone Gap Clinic, Big Stone Gap VA 24219

Courtesy Member:

Ronald Burton Dietrick, MD, General Surgery, PO Box 70, Kwangju Christian Hospital, Kwangju 500, Korea

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Harry C. Kuykendall, MD *Alexandria*	8th	**Nicholas G. Colletti, MD** *Woodbridge*
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C. Barrie Cook, MD *Fairfax*	10th	**Gerald J. Fisher, MD** *Alexandria*

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Richmond	*Virginia Beach*	*Richmond*

Vice-Speaker of the House: **Richard L. Fields, MD,** *Fairfax*

AMA Delegates

Delegates		Alternates
Michael A. Puzak, MD *Arlington*	1978-1979	**W. Leonard Weyl, MD** *Arlington*
Carl E. Stark, MD *Wytheville*		**Raymond S. Brown, MD** *Gloucester*
F. Ashton Carmines, MD *Newport News*	1977-1978	**William J. Hagood, Jr., MD** *Clover*
John A. Martin, MD *Roanoke*	1978	**Arthur A. Kirk, MD** *Portsmouth*

VIRGINIA
MEDICAL
DECEMBER 1978

President Davis: "Unsurpassed Ability"

James Sidney Kitterman, MD, *Norfolk, Virginia*

"He will create, I know, an outstanding year as President. Perfection is his constant goal, inadequacy and mediocrity his anathema."

THE inaguration of Dr. Charles E. Davis, Jr., of Norfolk as the new President of The Medical Society of Virginia assures the continuation of the excellence in this high office that we have known and found so stimulating over the past several years. He brings to this office a legendary energy, dedication, and enthusiasm. A skilled and tireless surgeon, he has generated a very large and active practice over three decades. His patients as well as the hospital staff characteristically remember him for his 5 to 6 AM rounds. His deep and unrelenting concern over his patients' welfare is common knowledge and has endeared him to his large clientele. Despite his active and enthusiastic surgical life, he has found the time to direct his energies in many other directions in his quest for excellence. One of these, fortunately, is organized medicine in general and The Medical Society of Virginia in particular.

Charlie Davis was born in Nottoway Courthouse, Virginia, but was raised in Davis Valley, Smyth County, where the stern conservatism of the Alleghenies was to exert a lifelong influence. He attended grammar and high schools in Rural Retreat, Virginia, eight miles away from his home, where his academic excellence was quickly appreciated. High school athletics were an enthusiasm, and he can tell many amusing anecdotes about baseball played under somewhat primitive conditions in southwest Virginia towns. Quail hunting and horseback riding were avidly followed when his farm work permitted.

Top priority, however, was his schooling, which was unrelentingly insisted on by his parents; other students might be kept out of school now and then to help with the work at home, but never young Charlie Davis. Higher education was initiated at Roanoke College in Salem, Virginia, the alma mater of his father, where he received the designation of First Distinction Scholar and was awarded, at the close of his sophomore year, the coveted Thomas Fortune Ryan Scholarship by the University of Virginia. Transferring to UVa, he consistently made the honor roll and, in his last year of medical school, was elected to the national honorary medical fraternity, Alpha Omega Alpha.

His postgraduate training began at the Cincinnati, Ohio, General Hospital, where he interned, but he returned to Charlottesville for his residency in the department of surgery at the University of Virginia

Hospital. Here his talent for teaching was everywhere apparent, and he subsequently served as instructor in both surgical pathology and general surgery. He remembers with particular appreciation two Chiefs who greatly influenced this long period of UVa training: Charles Bruce Morton and the late Edwin P. Lehman.

After a brief tenure as chief of surgery at Beckley Hospital in Beckley, West Virginia, he established his surgical practice in Norfolk. But private practice alone has never been enough for this accomplished teacher and inspiring lecturer: As a professor of surgery at Eastern Virginia Medical School, he continues to devote much time to sharing his rare surgical knowledge and experience with students, residents and fellow practitioners, and for 25 years he was surgical consultant at Portsmouth Naval Hospital. His intense interest in medical education made him a forceful chairman, for its first three years, of the Society's Commission on Continuing Medical Education, and his alma maters have recognized his commitment to their goals by honoring him on many occasions. Notably, he has been president of the University of Virginia Medical Alumni Association and a member of the board of trustees of Roanoke College, and Roanoke College conferred on him in 1971 its Medal for Distinguished Achievement.

Doctor Davis' colleagues, too, have time and again honored his professional excellence and his powers of leadership. He had a long tenure as director of the surgical department at both Norfolk General and DePaul Hospitals in Norfolk, is a past president of the Virginia Surgical Society and of the Norfolk Academy of Medicine, and has served on the Central Committee of the American College of Surgeons. His board certification in surgery was conferred soon after his residency training, and he is active in many surgical organizations.

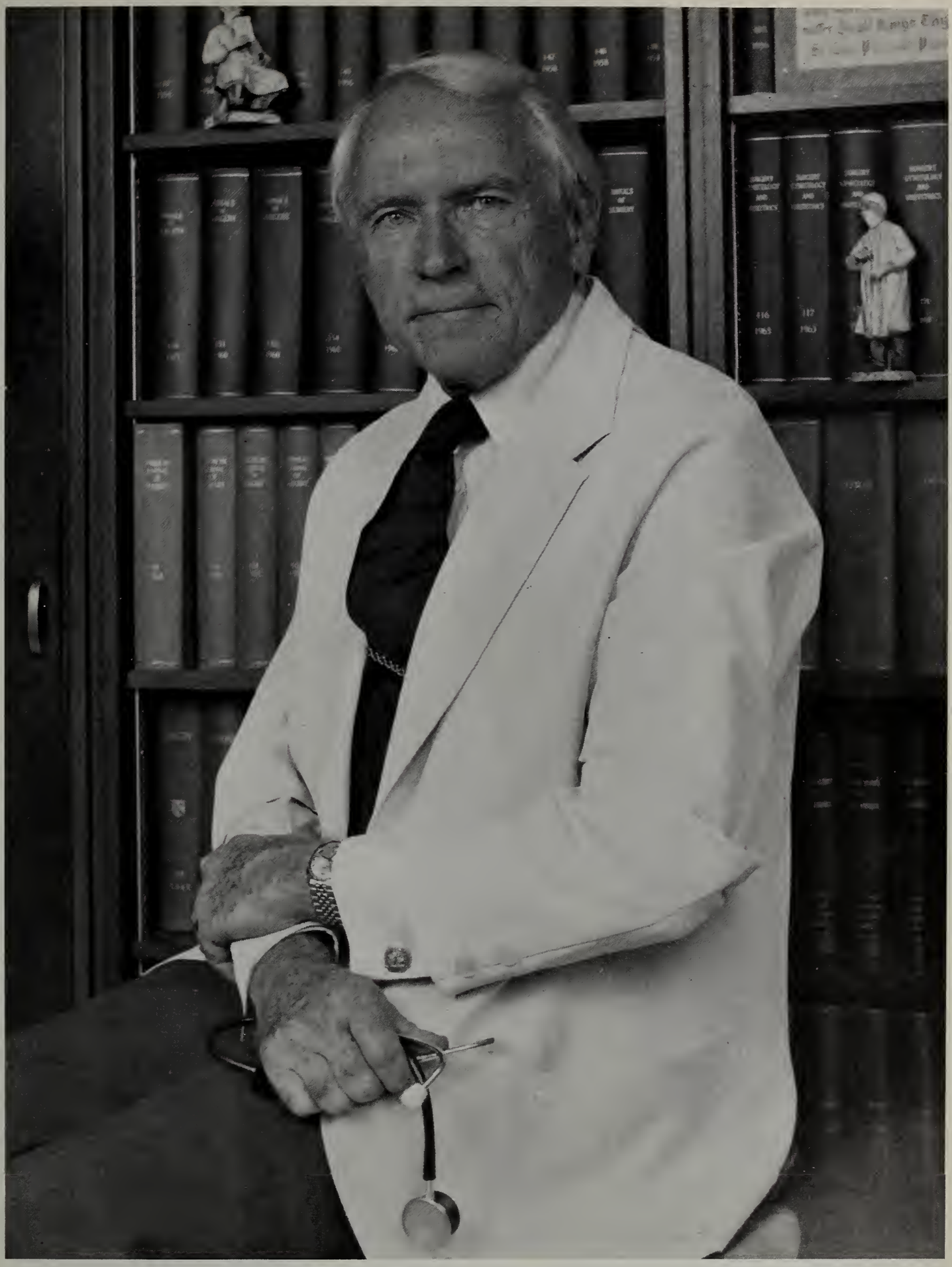
For The Medical Society of Virginia, he has served for six years as councilor from the second district and also as vice president, from which vantage points he has accumulated incisive preparation for the presidency. Many MSV committees have benefitted from his membership; his multiple tenures as a member of the Editorial Board of this journal have been particularly appropriate, for he has a superb command of the written and spoken word, and his articles, spanning diverse subjects, have been published both in Virginia Medical and in journals of international prestige.

His wide range of interests, each intently explored, testify to a phenomenal energy. A prodigious reader, he is a continuous student of history and English literature and is comfortable quoting Shakespeare, Alexander Pope, or Alfred Housman. So well informed is he on such a variety of subjects that he continues to astound even those who know him well with his mental storehouse of facts. Whether asked for the history and treatment of the Zollinger-Ellison syndrome, or for the name of the UVa quarterback of 1961, his recall is instant and definitive.

Horticulture is a particular passion, and, as in all things, he excels at it. He raises and often exhibits camellias of show caliber, and his garden in the spring is aflame with exotic azaleas. He is keen on golf, which brings his competitive instincts to the fore and emphasizes his singular tenacity in any endeavor. His wife, the former Kathryn Anne Hurd, also is an avid golfer, and they share a joy in vacations on the splendid links of Pinehurst, North Carolina, and the Cascades of Healing Springs, Virginia.

The Lutheran church, of which Doctor Davis is a lifelong member, has exerted a profound influence on him, as has the rigorous philosophy of the mountains in which he was reared. Perfection is his constant goal, inadequacy and mediocrity his anathema.

I have been privileged to know Charlie Davis since our four years together as UVa medical school classmates. As his fellow practitioner in Norfolk and as his associate in many medical societies and hospital staff committees, I have continuously admired his many abilities. He brings to the Society presidency a background of unsurpassed experience and ability, and he will create, I know, an outstanding year as President.



CHARLES E. DAVIS, JR., MD, PRESIDENT, 1978-1979, THE MEDICAL SOCIETY OF VIRGINIA.

Long Halls and Heroes: MSV Meeting 1978

WILLIAMSBURG and its Conference Center may not be Camelot, but surely it's the next best thing in these parts, and it suited us right down to the ground when we gathered for our 131rd Annual Meeting the first weekend of November. There were many round tables around which our brave knights and their fair ladies sat in work and in pleasure; there were many long halls where our heroes and leaders joined combat with HSA, nhi, HEW, lesser evils and highwaymen; and there were many fields of honor where tilting and jousting with racquet and club filled happy hours.

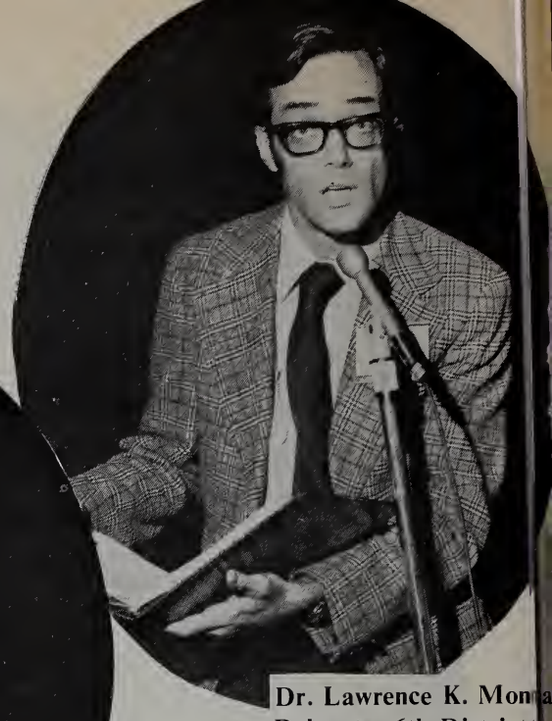
The hard work of the Society was done by the chieftans—the delegates, that is, in plenary sessions and in reference committees. The double-barreled scientific programs on Friday afternoon and Saturday morning were broad in scope and useful in content, and we thank the Program Committee for providing this innovative and rewarding CME opportunity. The exhibits, both scientific and commercial, were distinguished this year in numbers and quality, as the members and wives who thronged through them bore witness.

We bade farewell as President to Doctor Hagood, who has brought us safely through a turbulent year, and recommend his clarion call to arms, to duty and to action which you will find on page 845 of this issue. It is comforting to know that we have a strong leader in the new President, Doctor Davis, who will unquestionably continue the high level of competent direction that has characterized our leadership.

There was much to think about and to reflect upon as we went our separate ways. On one thing, at least, we were all agreed: We had a beautiful time in a beautiful place in a beautiful autumn season. Those who did not come are the poorer.

See you next year at the Homestead in Hot Springs!

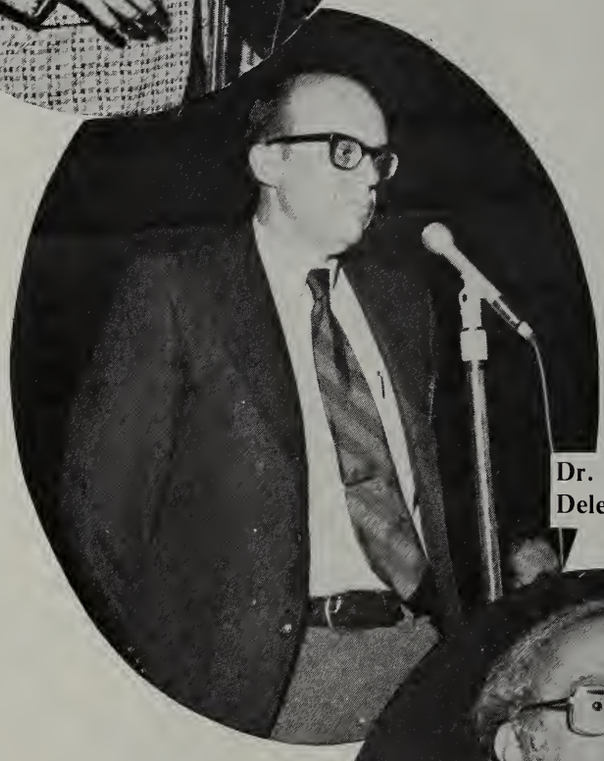
W.T.T., JR.



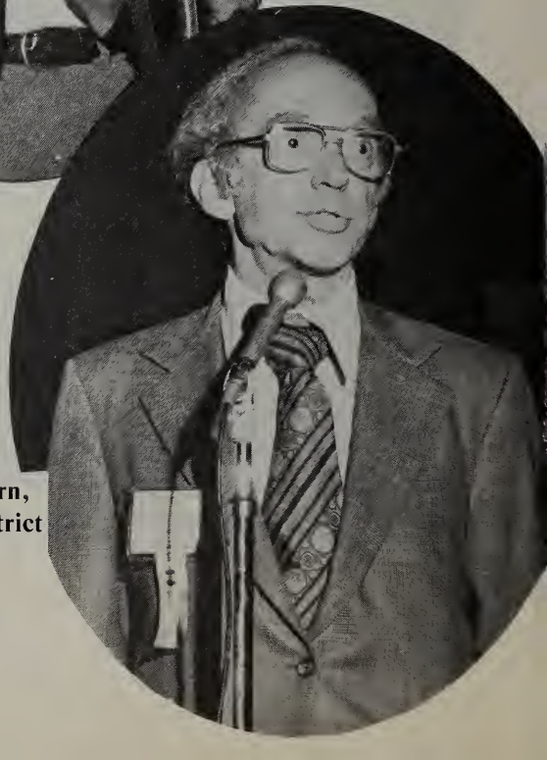
Dr. Lawrence K. Monn
Delegate, 6th District



Dr. Nicholas G. Colletti,
Delegate, 8th District



Dr. Henry S. Campbell,
Delegate, 5th District



Dr. Donald S. Thorn,
Delegate, 10th District



Dr. J. Shermer Garrison III,
Delegate, 4th District



. William McC. Eagles,
legate, 3rd District



Dr. William H. Barney,
Chairman, Reference Committe



Dr. E. O. S. Stevenson,
Chairman, Reference Committee 1

ow, Dr. Richard L. Fields,
e-Speaker of the House (left),
Dr. William D. Liddle, Jr.,
airman, Reference Committee 2





Dr. John A. Martin,
Past President

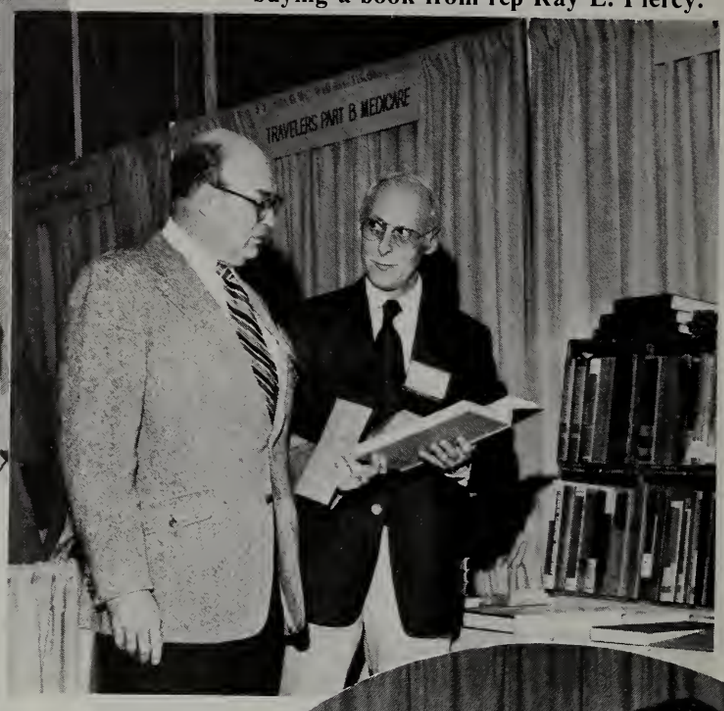
"The hard work was done by the chieftains."

Exhibits: "Distinguished in numbers and quality"



At the Upjohn booth, Dr. William E. Painter (left) and Dr. William H. Barney (center) listen to rep James W. Anderson.

At the W. B. Saunders booth, Dr. H. Clarkson Meredith, Jr., (left) considers buying a book from rep Ray L. Piercy.





Standing room only in the technical exhibit hall, as physicians crowd in to visit the 34 booths leased by commercial firms.

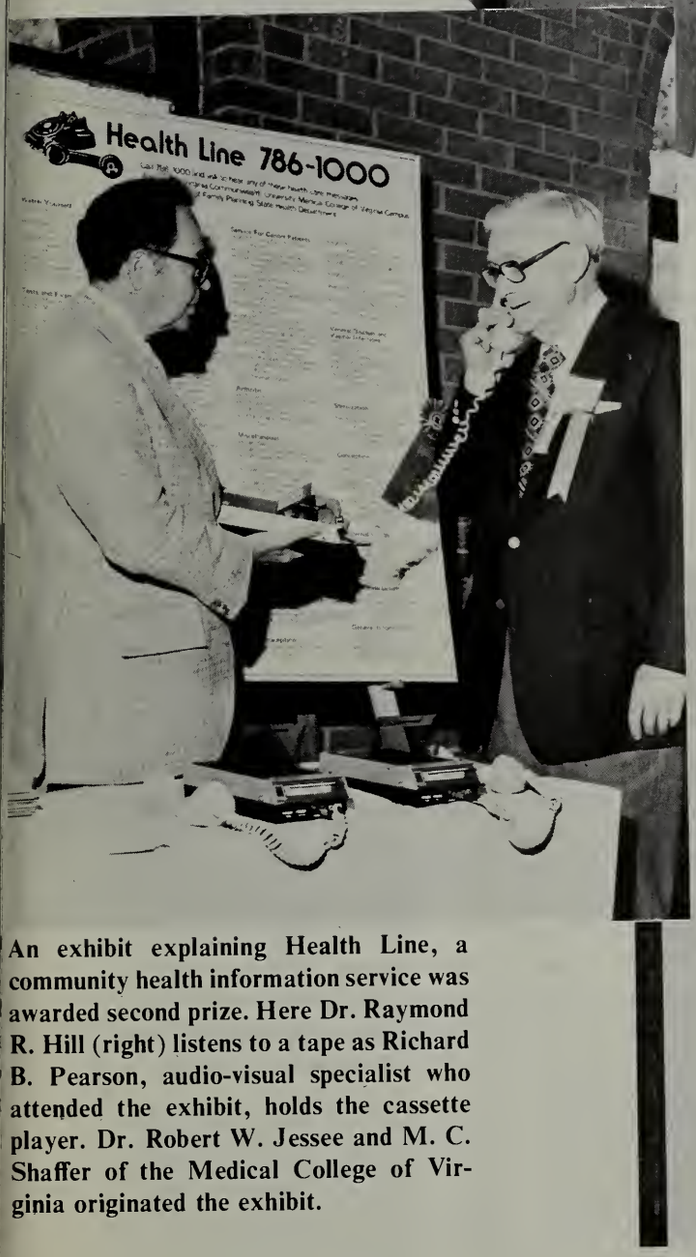


At the Peoples Drug Stores booth, D E. A. Barham (right) listens to L. J. D Mino, Peoples vice president, describe t new unlisted telephone numbers that co nect physicians directly with Peopl pharmacists.

All photographs by Thomas L. William

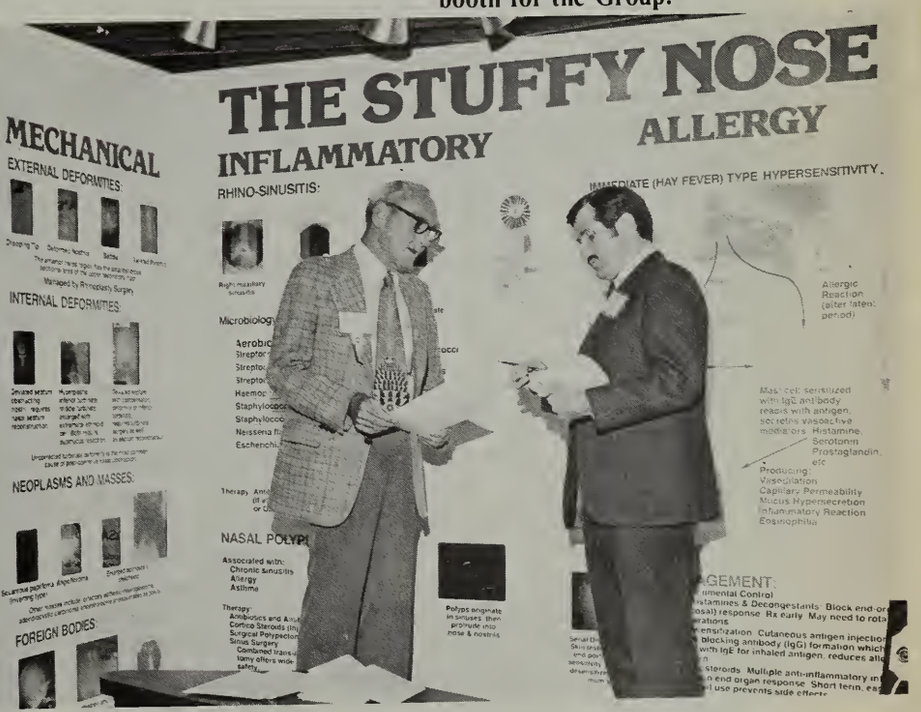


. Reuben B. Young (far right), Chairan of the Scientific Program, explains e agenda to Dr. Willette L. LeHew ft) and Dr. William C. Andrews (cenr), who presented papers in the section onsored by the Virginia Ob-Gyn ciety. Dr. Andrews' discussion of estrons and menopause is to be published on in this journal.



An exhibit explaining Health Line, a community health information service was awarded second prize. Here Dr. Raymond R. Hill (right) listens to a tape as Richard B. Pearson, audio-visual specialist who attended the exhibit, holds the cassette player. Dr. Robert W. Jessee and M. C. Shaffer of the Medical College of Virginia originated the exhibit.

Winner of the blue ribbon in the scientific exhibit area was "The Stuffy Nose", a dramatic display presented by the ENT Medical Group of Washington DC. Dr. Christopher J. Murphy, Jr., (left) is shown below at the exhibit with Dr. N. F. Fairbanks, who represented the exhibitors at the booth. The A. H. Robins Company display department designed and made the booth for the Group.



Scientifics: "Innovative, rewarding opportunity"

Leadership: "High level of competence"



Dr. William J. Hagood, Jr.
Retiring President



A Past Presidents medal was struck this year to be given to all now and future Past Presidents of The Medical Society of Virginia. Cast of a silver alloy, the medal bears the Society's official seal created by Dr. H. J. Warthen, Jr., and, on the reverse, the recipient's name and date of office. It is suspended from a ribbon, to be worn about the neck.

WINNERS

George M. Nipe, MD, Harrisonburg, won the office of MSV President Elect at the Annual Meeting 1978.

Elected Vice Presidents were Dr. Percy Wootton, Richmond; Dr. H. C. Alexander III, Roanoke; and Dr. Hugh G. Stokes, Jr., Williamsburg.

Newly elected as Councilor was Dr. William W. S. Butler III, Roanoke, to replace Dr. Alexander, and two new Vice Councilors were chosen: Dr. John M. Stirewalt, Waynesboro, and Dr. George E. Broman, Culpeper. Dr. William J. Hagood, Jr., Clover, retiring President, was elected an Alternate AMA Delegate.

The presidency of the Auxiliary was conferred on Mrs. Richard F. Clark of the Hampton Medical Society Auxiliary.

Winner of the A. H. Robins Award for Community Service was Dr. Harry J. Warthen, Jr., Richmond, longtime Editor of this journal and now its Editor Emeritus.

For winners of the blue and red ribbons for scientific exhibit excellence, see the previous page. The third place winner was the exhibit "Percutaneous Transhepatic Cholangiography" presented by six physicians of the Alexandria Hospital whose exhibit won first prize at last year's meeting: Drs. Ira J. Green, Walter S. Choi, Michael H. Friedman, William V. Hindle, Jr., Barry T. Katzen and Allan Zellis.

Dr. John T. Hearn, Penn Laird, carried off the Challenge Cup, symbol of the Society championship, with the lowest gross score in the golf tourney. Other golfing winners were Dr. Merritt W. Foster, Jr., Richmond, low net; Dr. Leon H. Alexander, Lake City, Florida, second low gross; Dr. C. C. Pearce III, Alexandria, second low net; Dr. Gerald C. Burnett, South Boston, longest drive; and Dr. Frank N. Buck, Jr., Lynchburg, closest to pin.

On the tennis courts, Dr. John W. Knarr, Virginia Beach, was the men's singles winner, and Dr. Ira D. Godwin, Fairfax, was runner-up. Dr. and Mrs. Carrington Williams, Jr., Kilmarnock, placed first in the mixed doubles matches, with Dr. and Mrs. Robert P. Trice, Richmond, as runners-up.

A large Virginia ham was the prize in a drawing for the representatives who occupied the 34 technical exhibit booths, and Danny Lee Ginn, Meyer Laboratories rep, had the lucky number. Watches were won in a raffle at the David A. Dyer & Associates booth by Dr. Malcolm Tenney, Staunton; Dr. J. E. Schuite, Towson, Maryland; and Dr. B. A. Baber, Newport News.

"It Was a Good Year"

William J. Hagood, Jr., MD, *Clover, Virginia*

WHEN people talk about new presidents taking office, they always talk about honeymoon periods—those first couple of months when the president moves around, talks to a lot of people and gradually begins putting his programs together. On my first day in this job, I was about 15 minutes into setting up such a schedule when my reverie was shattered by word that HEW was scheduling its only hearing on national health insurance in Virginia just six days later in Roanoke. Thanks to a lot of help from the staff and our consultants, we were able to prepare testimony and Dr. Christopher Alexander made an excellent presentation for us at the hearing. Since that time, those initial 15 minutes represent about the longest period of reverie I've had in this job.

But my presence here today is proof that I have survived, and I'm here to tell you that I'm proud of what our Society has done the past year and that you have a Society of which you can be proud.

- You can be proud of the fact that membership has increased by 4%.
- Proud of the fact that our new Vanguard Committee is working hard for all of us.
- Proud of the badly needed progress that's been made in revision of our bylaws.
- And, perhaps most importantly, proud of your councilors, Executive Committee, headquarters staff, consultants, and so many individual members who have worked extremely hard to establish a positive record of working in your behalf in a constructive, responsible manner. In the past year we've worked to further the cause of quality health care on many fronts. We've worked with literally dozens of organizations and groups at the federal, regional, state and local levels. Legislative, regulatory, advisory and consumer. Planners and coordinators. Hospitals, third party payors and medical professionals. We've been involved with these groups, been represented before them and, most importantly, we've been effective. We have made an impact.

Presented before the House of Delegates at the Annual Meeting of The Medical Society of Virginia, the Williamsburg Conference Center, November 2, 1978.

As my adrenalin flowed and ebbed while going about the duties of President, I was frequently asked, "What is it like to be the President of The Medical Society of Virginia?" In one of the many letters to my dear friend and our next President, Dr. Charles Davis, Jr., I answered the question in these six words. The Presidency is a glorious agony. The involvement of the Society this term in my opinion has been, on balance, far more glorious than agonizing.

First, with regard to the Society itself, I think it is indeed encouraging and gratifying that, at a time when there are reports of apathy within the ranks, we have more members than at any time in our history. This is not only encouraging, it is extremely important because never in our history has our profession been under more attack or the need for physician activism been greater. There are a number of reasons for this membership increase, but I believe much of the credit is attributable to District VI Councilor Dr. Christopher Alexander, Chairman of our ad hoc Commission on Membership, and the staff support he received from Jim Moore.

Next, the insurance program the Society provides for its members. I believe our insurance program needs close scrutiny year after year, always looking for the best deal. Earlier this year, I asked the Insurance Committee to review our programs and make recommendations. The Committee reports it has found a better approach than that currently used. Council agrees, and now it's your turn to cast a vote that counts by exercising your option to purchase the policies.

Now, another problem and my recommendations for solving it. Currently, there's a communications, operational and planning no-man's land between Council and the Society's 36+ committees. In brief,

committees follow out the policies of the House of Delegates, yet there are no direct lines of communications between committees and Council. I believe that a commission system could resolve many of the difficulties the Society has experienced.

The basic idea is to have 36+ committees assigned to five streamlined commissions: membership, education, legislation, communications and administration. Each would be chaired by a senior and a junior councilor as vice chairman. For example, our Commission on Continuing Medical Education would become the Commission on Education with the following committees under its jurisdiction: continuing education, annual scientific program, pharmacy, mental health, maternal health, rural health, child health and sports medicine.

In order to test the effectiveness of this type of approach, I appointed Dr. Christopher Alexander, Councilor from District VI, Chairman of an ad hoc Commission on Membership. Membership was chosen because the results can be accurately measured, to wit: The Society's membership went from 5,800 to over 6,000. The AMA numbers were 2,976 and now they are 3,175. As I said earlier, I believe the Commission on Membership's success happened, in great part, because of its close contact with Council and because of excellent staff support from Jim Moore.

I strongly recommend the House instruct the Committee on Bylaws to continue the study of the commission system and the Committee should advise the House annually of continued shifts to the commission system.

And this brings me to the next subject on my list: bylaws. When the bylaws were examined, one got the feeling items had been crammed into an overstuffed closet. Open the door and out tumbles duplications, repetitions, conflicts, redundancies—and they are all covered with a thick layer of verbosity. I started working on this project years ago, and Mr. Allen Goolsby, the Society's lawyer, and I have labored many months over the proposed revision before you. Although the revision is not yet perfect, we believe it is a tremendous improvement and goes a long way toward fulfilling the Society's need for a concise, functional, simple and effective document. The proposed revision is now in your hands and awaits your definitive action. I recommend the House adopt the revision.

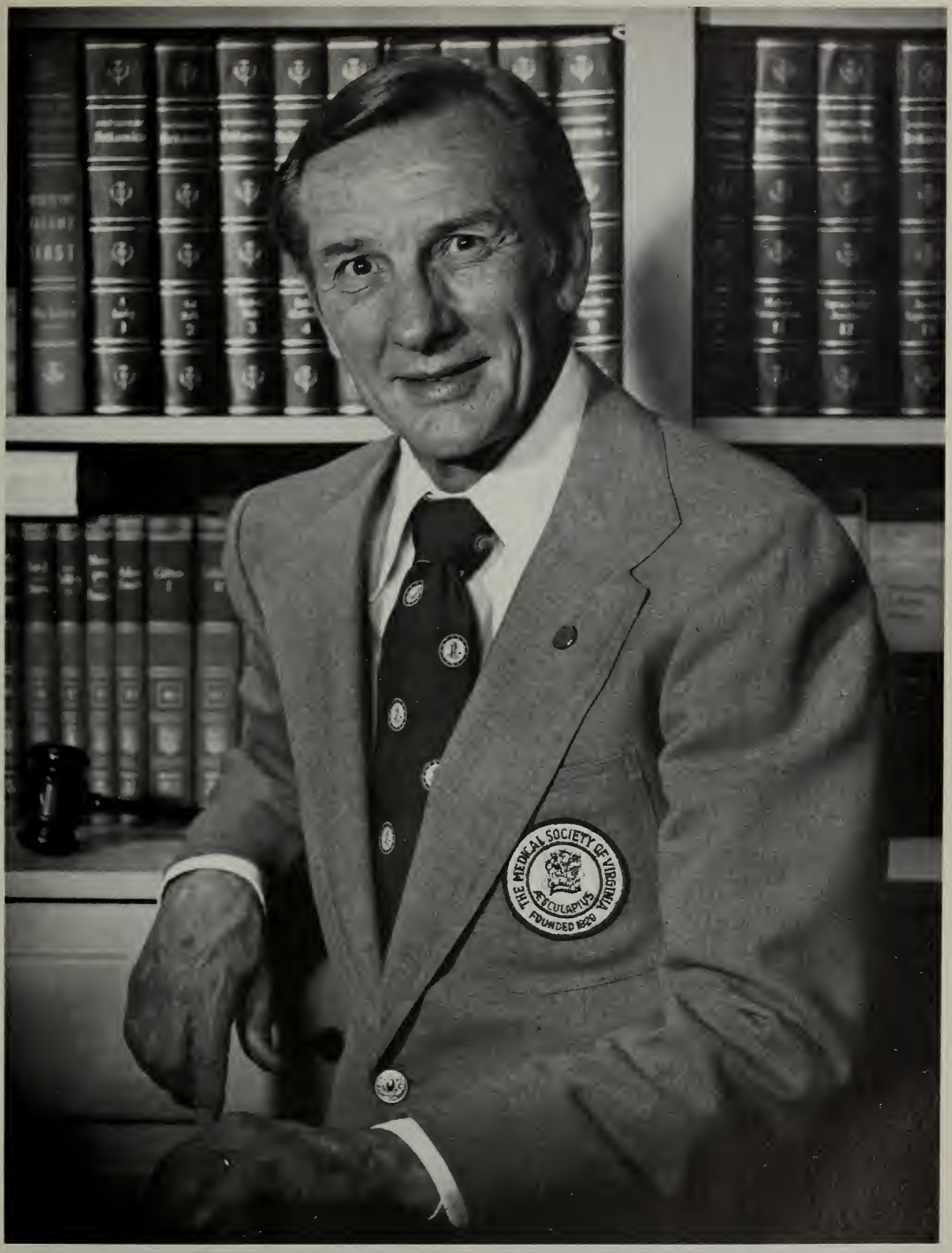
In all the years I have been privileged to be a member of the Society's official family, I have proudly watched this organization continue to add to the services it provides to members. On the other hand, I have noted we are continually fighting brush fires and going from one crisis to another. This results in group dyspnea. Is there a solution? Yes, I believe there is. I feel there's a clear path through this morass that will eventually allow us not to just react but, more importantly, to anticipate crisis without dyspnea. The key word is continuity. We must give outdated approaches and programs a merciful death. We must do our best to make worthwhile ones flourish. And we *must* plan for the future.

One of the greatest joys I had, as your President, was the Executive Committee I selected. Dr. Leonard Weyl, Dr. Charles Davis, Jr. and Dr. George Nipe and I went over the agenda on the night before Council met. Being an independent group, Council sometimes disagreed but, for the most part, this new procedure enabled it to move wisely through long agenda and act on serious problems. This Executive Committee gave a full measure of service and then some, and I am deeply appreciative.

In this incomplete list of our activities this past year, I believe I have presented you with positive recommendations. If these receive your support, I feel the Society can move forward on a much more solid footing into the future. I think we'll have the continuity we need. And, I believe we will than have the capability of concentrating more on promoting the science and art of medicine—one of the major purposes of this organization receiving little of our attention this year.

UNTIL now, I have pretty much focused on the internal workings of our Society. I could spend many minutes more on such areas as our new and promising computer capabilities, on the mechanics of our daily operations—but it's time instead to turn your attention to the Society and its relationships with all those groups and individuals on the outside which are, whether we like it or not, intimately involved with and deeply concerned about medical care. At the top of my list is one of the projects of which I am most proud. It's a group that, I believe, is going to have a tremendous positive impact and one that has built up an impressive record despite its newness and the size of problems it has been asked to tackle. I'm talking about our Vanguard Committee.

Less than four years ago, an avalanche of white paper emblazoned with awesome federal health regulations descended on the heads of the medical profession in the form of Public Law 93-641, better known as the Health Planning Act. Although this law did not draw a lot of attention immediately, what it actually did was establish consumer control over the directions health care delivery will go in our commonwealth and our nation. Since passage of the legislation, five Health Systems Agencies have been established in Virginia and they are charged with planning to meet what they perceive to be the health needs of



WILLIAM J. HAGOOD, MD, PRESIDENT, 1977-1978, THE MEDICAL SOCIETY OF VIRGINIA.

Virginians next year and in future years. Although individual physicians serving as volunteers on HSA boards, task forces and committees have donated thousands of hours in a sincere effort to help guide the planners, it was obvious there was no way our profession could cope with the complexities of the situation on an ad hoc basis or as single individuals being continually swamped with two or three hundred sheets of paper each week from their HSAs.

Thus, on November 19, 1977, I appointed the Vanguard Committee. I charged it with, first, the responsibility of monitoring and getting more physicians involved in HSAs as well as to provide support for the physicians already active in the organizations. Next, Vanguard was to begin work on other activities in the legislative and regulatory arena. For example, the Virginia Study Commission on Health Care Costs is closely scrutinizing many aspects of the "health industry" in our state. And a series of reports have been prepared for the group by the Insurance Commissioner's office. Public hearings will be held throughout the winter and spring and the Commission will make recommendations to the House of Delegates. Frankly, we could be looking at recommendations which would, if passed in Richmond, restructure medical care and reimbursement.

I can assure you Vanguard and the Society staff are on top of the situation.

But what Vanguard means to you is that we now have a full-time watchdog group on duty to pore through the thousands of pages of reports and research identifying key strengths and weaknesses. Vanguard is also making specific positive recommendations, focusing the Society and its members' resources into the appropriate areas and, in short, making us far better prepared to deal with as many as possible of these serious problems in a responsible and rapid manner. The Vanguard Committee will give its report to you later today. Please listen closely to what they've done and what they recommend. The need for Vanguard and the need for your personal involvement grows every day. I recommend the Vanguard Committee become a standing committee of our Society.

There is another physician's organization that can be deeply involved in health planning—and it is the *only one* that is capable of estimating and protecting quality of care. PSRO has been viewed by some as "a dichotomous sort of weed". Nevertheless, it is legislatively mandated and, I emphasize, a physician organization. It needs active and continuing doctor support. In health planning, it is our direct legal avenue of communications with HSAs, state planners and Washington. What PSRO says about all these health plans *cannot* be ignored.

To further enhance the Society's capability to make a positive impact on health planning, the President put into action former President Dr. John Martin's idea and appointed Virginia's five PSRO presidents to a Liaison Committee to the Society. I was delighted when Dr. Harry Kuykendall agreed to become chairman.

Now, with Vanguard and the PSRO Liaison group, we have two strong arms. Let's use them.

During the year, I was also back and forth to Washington and Richmond many times representing the Society during hearings and meetings on proposed legislation. Because of the hard work of the medical community, the administration's cost containment package was defeated and we'll have another chance to get better amendments to PL 93-641 this winter. And I worked closely with the Society's fine Legislative Committee, our legal consultant, Allen Goolsby, Will Osburn, Dr. George Contis' group and Ed DeBolt's group in these complicated matters. And, because of this degree of involvement, we uncovered two problems within our legislative work that needed a policy established so the Society can be more responsive and effective.

First, we've been able to work out a system so legislators can be given the Society's position on legislation when they need it on short notice even when Dr. Charles Davis, the President and spokesman, is working in a patient's abdomen. And, second, our Legislative Committee has devised a plan so every single legislator can receive objective counsel on all of the more than 200 separate health-related bills coming across his desk. I believe these will supplement, when necessary, the Society's traditional approach that Will Osburn has handled so well for us over the years.

IF there's one thing I've learned this past year, it's the fact that any physician who has to deal with one or more of the people involved in health legislation or regulation would do best if he or she were trained in two arts, communications and negotiations. During the coming year, I recommend the Society resume Workshops in Communications. I believe we have to become more professional in our dealings, particularly with the media and elected officials. We must be trained to present our views on the issues, the problems, and the accomplishments of medicine so the public will be better informed on the positive work done on them by their doctors to help keep costs down.

In regard to negotiations, HEW is currently trying to push legislation through Congress that would eliminate usual, customary and reasonable fee reimbursement under Medicare and Medicaid and replace

UCR with a series of fee schedules negotiated by doctors and carriers at state level. HEW hopes to have the legislation in effect by next fall. If it is, practicing physicians would be appointed to negotiating groups to hammer out fee schedules with insurance representatives and, perhaps, members of the general public.

Last November, AMA's Department of Negotiations conducted an extremely successful primary negotiations seminar in Richmond. Yet an advanced negotiations course to be held here had to be cancelled because so few signed up. I had hardly cancelled the course when I got the first firm information on HEW fee schedule plans. I strongly recommend that both primary and advanced negotiations courses be conducted next year to enhance physicians' skills in this increasingly important area.

Now let me tell you about the success doctors from Lynchburg have had in getting a message to the public through the media. Last spring, the pharmaceutical firm of Burroughs Wellcome offered to work with practicing physicians in a pilot program for radio and TV. Since a controlled and circumscribed area offered the best chance for success and because I knew that the doctors from the Lynchburg Academy of Medicine would be enthusiastic and supportive, I chose that area to begin this activity, and I am now pleased to report the program has been most successful. Should other societies wish to get into this activity, I urge you to contact the Lynchburg Academy or Ed DeBolt's group for advice.

One of the most carefully and extensively studied problems your Society and its President faced this year was the Society's relationship to Blue Shield. There is no need to recount the often tedious and wearisome work that went into the policy adopted by Council on May 13 and reported in the July issue of VIRGINIA MEDICAL. Quoting from our journal, "The proposed statement expressed strong support for provider control but recognized the necessity for the Blue Shield of Virginia board to operate independently of state, local and specialty societies." I urge this House to ratify Council's action.

In addition, we also have a new approach to the Society's responsibility in risk management as a result of a September meeting with the State Board of Medicine. Dr. Robert C. Green, Jr., Councilor from the 7th District, will head a committee in this endeavor and will report to the Society.

As you can see, opportunities will be before the Society in numbers as never before. I list some of the things I believe we'll need to meet them:

- A communications department.
- A policy book.
- An index of House of Delegates transactions.
- More active and imaginative planning for our Society.

I believe we also need:

- To increase communications on health issues between physicians and people involved in legislation and regulation, particularly if they are patients.
- To develop and offer annually a practice management program.
- To help Edgar Fisher extend his physician placement figure well beyond 1,000.
- To involve the Auxiliary more in Society activities.
- To develop and offer annually a program on socioeconomic issues in medicine for medical students and house staffs.
- To promote more actively the stated purposes of The Medical Society of Virginia.
- To include the Speaker in the official family that attends AMA's House of Delegates.
- And, as Dr. John Martin and other Presidents have said, I believe there should be some remuneration for the office of President. I endorse that concept and recommend you instruct Council to effect an appropriate policy.

THREE hundred and eighty-three days have now passed since that first 15 minutes of reverie. There were many times when I thought I'd never survive to see this day. But, like so many other times, now that I am here I look back and the time seems to have passed almost too quickly. I emphasize almost. But it was a good year for our Society. A year of positive accomplishment and change. A year in which programs were set in motion that have the potential of helping our profession in times to come. A year in which more Society members actually participated in Society programs that in any time in our history.

I've learned a great deal in the past year—about myself, my profession and the tremendous threat we and the people of the country face from over-zealous government regulators. But, most importantly, I am thoroughly convinced there is much we *can* do *if* we have the commitment, and are prepared to make the necessary sacrifices.

I don't believe it is an exaggeration to say the future of health care in this country is still within our purview to decide. But if we stand idly by, federal control will become a reality and our profession will have to accept much of the responsibility. If we accept that challenge, however, I am confident the fine people of medicine can help develop a way of health care that will ensure standards of quality for future generations that equal or even exceed those we have given in the past. ■

Splenic Vein Obstruction With Bleeding Gastric Varices: A Diagnostic Approach

P. M. Fitzer, MD, and J. R. Stephens, MD,
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It is important to separate splenic vein obstruction from other causes of variceal bleeding. The authors provide a diagnostic sequence for avoiding errors of management, citing a case to illustrate.

SPLENIC VEIN obstruction leads to segmental splenic hypertension with the subsequent development of collateral venous channels and possible gastric varices. Clinically significant upper gastrointestinal bleeding may result from these varices. Since a simple splenectomy rather than a portasystemic shunt procedure will prevent future bleeding by eliminating arterial inflow, it is important to separate splenic vein obstruction from other causes of variceal bleeding. This report describes the diagnostic approach to a typical patient with upper gastrointestinal bleeding due to splenic vein obstruction.

Case Report

A 61-year-old man was admitted with acute upper gastrointestinal bleeding. About one year previously he suffered blunt abdominal trauma in an auto accident. Over the next several months he developed persistent midabdominal pain, and after an extensive evaluation, laparotomy was performed. At surgery, the distal pancreas was hard to palpation and was resected. The final pathological impression was focal chronic pancreatitis, probably traumatic. A liver-spleen scan done at that time showed splenomegaly. With the exception of elective cholecystectomy for symptomatic cholelithiasis, the patient did well until the present. He entered complaining of weakness and sweating and black stools. The physical examination on admission was pertinent for signs of hypovolemia and for the absence of stigmata of chronic liver disease. Initial SMA-14, SMA-6, urinalysis, and CBC were unremarkable except for a hematocrit of 26%. Emergency endoscopy showed bleeding from the proximal stomach, but blood obscured the site. A subsequent upper gastrointestinal series showed no abnormalities. After blood transfusion and stabilization, repeat endoscopy was done. The esophagus was normal, but the proximal gastric mucosa had prominent, nodular-looking folds with a slightly bluish tint. Several of these folds had linear ulcerations. No biopsies were done because of the possibility that these nodular areas represented gastric varices. A liver-spleen scan again showed moderate splenomegaly.

With the finding of gastric varices and splenomegaly but without the biochemical or physical stigmata of chronic liver disease, the possibility of splenic vein obstruction with segmental splenic hypertension was raised. Celiac arteriography was done and showed failure of opacification of the splenic vein on the venous phase; however, multiple small veins in the gastric fundus were opacified (Fig. 1). Splenomegaly was present, and there was a prolonged splenic blush suggesting slow venous drainage from the spleen. A superior mesenteric injection showed no filling of the same small fundic veins. These findings strengthened the clinical impression of splenic vein obstruction with segmental splenic hypertension. To rule out portal hytension, hepatic venography with measurement of the

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corrected hepatic wedge pressure was done: the pressure of 5-10 mm of mercury was within normal limits (Fig. 2). The hepatic wedge venogram showed normal dynamics. To confirm the diagnosis and to aid the surgeon by outlining the collateral venous drainage from the spleen, splenoportography was performed. The splenic pulp pressure was 20 mm of mercury (normal—less than 20 mm of mercury). The splenoportogram showed principal drainage via abundant short gastric veins to the gastric fundus where many varices were present (Fig. 3). These gastric varices drained to the portal vein via the coronary vein. A few short gastric veins drained into the gastroepiploic vein along the greater curvature.

Because the patient had typical findings of isolated splenic vein obstruction with segmental splenic hypertension, splenectomy was done. At surgery, the liver was



Fig. 1. Venous phase of celiac arteriogram. Splenic vein not opacified. Pronounced blush in gastric fundus, due to multiple small varices, is present (large arrow). Spleen is enlarged (small arrows). Clips are from previous partial pancreatectomy.



Fig. 2. Hepatic wedge venogram. Small end hole catheter is passed from the femoral vein up the vena cava (small arrows), and tip is wedged in hepatic vein. There is normal parenchymal blush (double arrows) with normal filling of portal radicles (large arrow).

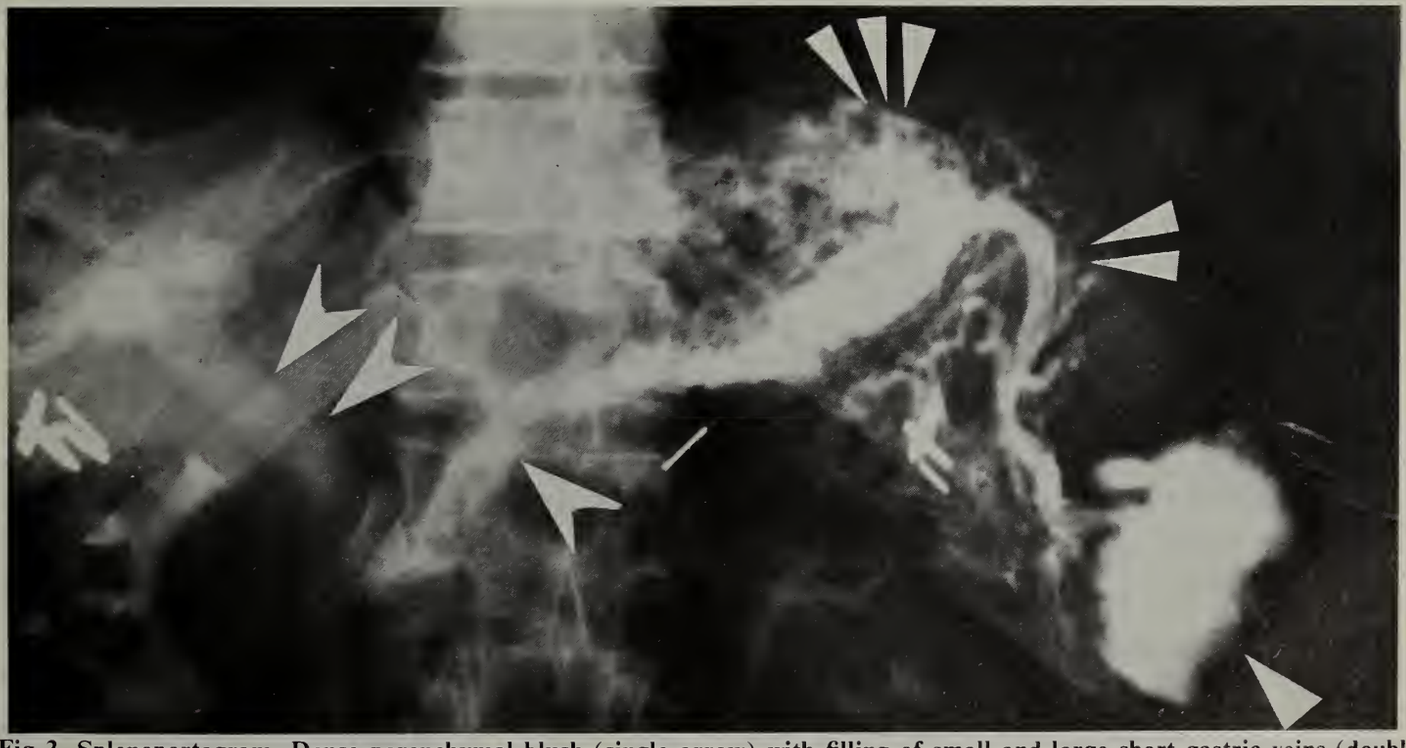


Fig 3. Splenoportogram. Dense parenchymal blush (single arrow) with filling of small and large short gastric veins (double arrows) and opacification of the gastric fundal varices (triple arrows). Varices drain antegrade through coronary vein (single large arrow) to portal vein (double large arrows).

Table 1. Differential Features.

	Splenic Vein Obstruction (segmental splenic hypertension)	Portal Vein Obstruction (portal hypertension)
1. Liver function tests	normal	abnormal
2. Endoscopy	varices usually gastric	varices usually esophageal
3. Upper gastrointestinal series	varices usually gastric	varices usually esophageal
4. 99mTc-Sulfer colloid scan	splenomegaly in at least 50%, liver usually normal	hepato-splenomegaly
5. Celiac angiography	splenic vein not opacified, gastric varices present	splenic vein opacified, varices are usually esophageal
6. Superior mesenteric angiography	gastric varices do not opacify	esophageal varices opacify
7. Hepatic wedge pressure	normal	elevated
8. Splenic pulp pressure	may be normal	elevated
9. Splenoportography	gastric varices draining antegrade, via coronary vein to portal vein	esophageal varices draining retrograde through esophageal venous plexus, retrograde flow through coronary vein

normal and the spleen was markedly enlarged. The patient recovered without incident and has had no further episodes of gastrointestinal bleeding to date (18 months).

Discussion

Splenic vein obstruction has been reported due to trauma, carcinoma of the pancreas or other retroperitoneal structures, pancreatitis, pancreatic pseudocyst, posterior penetrating gastric ulcer, and retroperitoneal fibrosis.[1–7] In this patient either the trauma directly or focal pancreatitis resulting from the trauma could be proposed as an etiology. The resulting segmental splenic hypertension leads to the development of splenoportal collaterals, principally via the short gastric veins. These drain to the fundic plexus, then antegrade through the coronary vein, to the portal vein. These dilated venous channels are manifest as gastric fundal varices, predominantly along the greater curvature.[3] Other collateral routes may also be present. The portal vein is patent and the portal vein pressure is normal. This is in marked contrast to patients with gastric varices from portal hypertension, where an elevated portal vein pressure is invariably present. Unlike segmental splenic hypertension, venous flow in portal hypertension is retrograde, principally via the esophageal venous plexus, since the portal vein is functionally obstructed.[8]

After the acute splenic vein obstruction, the splenic pulp pressure is presumably elevated with engorgement and enlargement of the spleen. Collateral venous channels then develop, which may at least partially decompress the spleen with decreasing splenic pulp pressure and size. The ultimate splenic pulp pressure and size depend on a complex equilibrium involving the arterial inflow volume, the efficiency of the venous collaterals, and other factors.[3] Hence, by the time patients present clinically with bleeding gastric varices, the pulp pressure may be normal with a normal splenic size, or both the pulp pressure and size may be increased. Not all patients with splenic vein obstruction develop clinically demonstrable varices, and even a smaller number have significant upper gastrointestinal bleeding; perhaps half have splenomegaly.[2]

When isolated bleeding gastric varices are identified by endoscopy or upper gastrointestinal series in a patient with splenomegaly and normal liver function studies, the possibility of splenic vein obstruction should be considered (Table 1). Patients with micronodular cirrhosis, the most common cause of functional portal vein obstruction, would be unlikely to show normal liver function studies. The diagnosis of splenic vein obstruction is then pursued angiographically. It whould be noted, however, that an occasional patient with both micronodular cirrhosis and splenic vein obstruction may be encountered.

Percutaneous catheterization of the celiac and superior mesenteric arteries is a simple routine procedure available in most departments of radiology. Key findings on celiac arteriography are: failure to opacify the splenic vein, demonstration of short gastric venous collaterals and other collaterals, and opacification of a normal portal vein.[3] The spleen may be normal or enlarged. The collaterals should not fill from a superior mesenteric artery injection. This is in contrast to the collateral veins of portal vein obstruction, which usually fill from a superior mesenteric artery injection. These findings strongly suggest splenic vein obstruction, rather than portal vein obstruction, as a cause of the gastric varices. This can be confirmed by indirect measurement of the portal pressure via the corrected hepatic vein wedge pressure.[9] This is easily done by percutaneous catheterization of a femoral vein at the time of angiography. A normal wedge pressure is almost always present in splenic vein obstruction, but the wedge pressure is elevated in functional portal vein obstruction. The diagnosis may be further supported by measurement of the splenic pulp pressure and splenoportography. These procedures are of low morbidity if modern techniques are utilized, but they are nevertheless infrequently employed.[10] In most cases they are prob-

ably not crucial to the diagnosis, since the splenic pulp pressure may be normal or elevated. A normal splenic pulp pressure would certainly favor the diagnosis of splenic vein obstruction, as the pulp pressure is elevated in portal vein obstruction. The collateral veins can best be opacified by splenoportography, but these veins can be filled from celiac arterial injection.

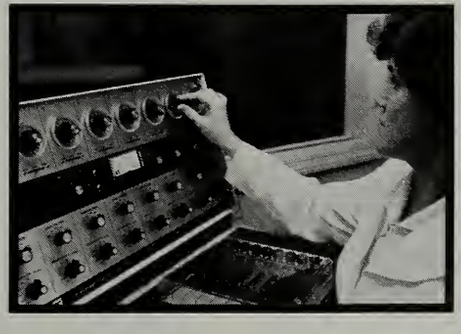
Splenectomy is effective therapy in patients with significant variceal bleeding due to splenic vein obstruction.[2,3] This cuts off arterial inflow with resulting decompression of the collateral venous channels. Portasystemic shunts have occasionally been done inadvertently; as expected, such shunts are ineffective, and may actually worsen the situation by increasing the flow through the variceal complex.[11] However, if portal vein obstruction is present, the possible presence of splenic vein obstruction must also be determined, for a splenectomy would then be needed in addition to the portasystemic shunt. A willingness to follow the diagnostic sequence described in this paper should prevent such errors.

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Cerebellar Hemorrhage and CT Scanning

William M. Chadduck, MD, and Charles R. Loar, MD,
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"Recognizing the clinical syndrome, establishing the diagnosis rapidly by CT scanning, and avoiding potentially lethal diagnostic procedures—all are of crucial importance in improving the morbidity and mortality associated with cerebellar hemorrhage."

CONSIDERABLE improvement in treatment of intracerebellar hemorrhage has occurred in recent years as a result of more aggressive surgical therapy and better recognition of clinical features of the entity. Prompt suboccipital craniectomy for evacuation of the hematoma and control of active bleeding is now recognized as the treatment of choice. McKissock's series[1] of 34 patients was particularly instructive in pointing out: that six patients died so rapidly that no treatment could be initiated; that all of 14 patients treated only by ventricular tapping or drainage died, and that nine of the remaining 14 treated by craniectomy survived, seven having minimal or no residual disability. The probable relationship of some deaths to ventricular decompression and upward herniation was also made.

The value of computerized tomography, or CT scanning, in diagnosing intracranial bleeding is well documented.[2,3] In certain stages of resorption, a hematoma may be isodense with or even less dense than brain tissue, but the acute hemorrhage is reliably more dense than brain and can be identified by its digitial readout in Hounsfield units.[4] CT scanning can also give information about the size and extent of a hemorrhage, demonstrate the ventricular size, and show the presence or indeed the absence of associated lesions such as neoplasms which have bled. Further, postoperative CT scanning gives evidence of a recurrent hemorrhage, if present, and the adequacy of ventricular decompression. Contrast enhancement is generally not necessary to show the acute hemorrhage, an important consideration when time is of such great importance. Since the CT scan can identify blood, it is not necessary to perform lumbar puncture, a procedure so dangerous in patients having a cerebellar mass. Ventriculography or ventricular tapping may also be avoided, thus eliminating other potentially lethal procedures.

CT scanning proved to be an invaluable aid in the management of five patients having cerebellar hemorrhages of various types. We are therefore presenting our experience with these patients as well as a brief review of the topic.

Presented at the 12th annual meeting of the Neurological Society of the Virginias, White Sulphur Springs, West Virginia, January 20, 1978.

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Case Reports

Case 1.

A 35-year-old, diabetic, hypertensive woman was admitted to Memorial Hospital of Martinsville and Henry

County following the acute onset of headache, vomiting, lethargy, and slurring of speech. Her examination showed her to be obtunded slightly; the left optic disc was blurred; nystagmus was present in both directions of horizontal gaze; bilateral dysmetria was worse on the right. A clinical diagnosis of intracerebellar hemorrhage or infarct was made. Cerebral panangiography by the transfemoral route showed normal anterior circulations, but a tight posterior fossa was suggested by flattening of the basilar artery to the clivus, anterior inferior displacement of one posterior inferior cerebellar artery and anterior displacement of the precentral cerebellar veins. The CT scan showed a cerebellar hematoma 5 cm in diameter on the right (Fig. 1) and minimal hydrocephalus. Suboccipital craniectomy was done with removal of the hematoma. Prompt and virtually complete recovery followed.

Comment. In this patient the diagnosis was suspected clinically and proven by CT scanning without necessity of lumbar puncture or ventriculography. The differential diagnosis between cerebellar infarct and hemorrhage was easily made and treatment undertaken without delay.

Case 2.

An 88-year-old woman suffered a catastrophic event heralded by headache and vomiting on the day prior to hospital admission. The next day she was brought to the hospital, comatose, with pin-point pupils, and in respiratory distress. Endotracheal intubation allowed suctioning of large amounts of gastric contents from the tracheobronchial tree. Immediate CT scanning showed a large intracerebellar hematoma with marked hydrocephalus and intraventricular blood (Fig. 2). A suboccipital craniectomy was done with evacuation of the hematoma, and a frontal ventriculostomy was performed immediately afterwards. No lasting improvement occurred, however. Blood gases showed a severe alveolar-capillary block with hypoxia persisting even with assisted ventilation and increased FiO_2. One week later the patient died.

Comment. The interval between the patient's arrival at the hospital and arrival at a definitive diagnosis was very short. If the patient had been seen immediately after the onset of her illness, the outcome might have been favorable, despite her age.

Case 3.

A 65-year-old man was admitted to Memorial Hospital following the onset of a severe posterior headache and vomiting. The right pupil was smaller than the left. No nystagmus or cranial nerve abnormalities were present. The right leg had been amputated. Lumbar puncture yielded hemorrhagic spinal fluid with xanthochromic supernatant. CT scanning showed a cerebellar infarct, some degree of ventricular dilatation, and blood was layered in the occipital horns. Cerebral panangiography was normal on the day of admission and on repeat examination two weeks later. Obtundation, confusion and a Babinski sign developed, but no progression of hydrocephalus was noted on subsequent CT scanning. Eventual improvement and total recovery



Fig. 1. CT scan of Case 1 shows hemorrhage (arrows) in right cerebellar hemisphere.

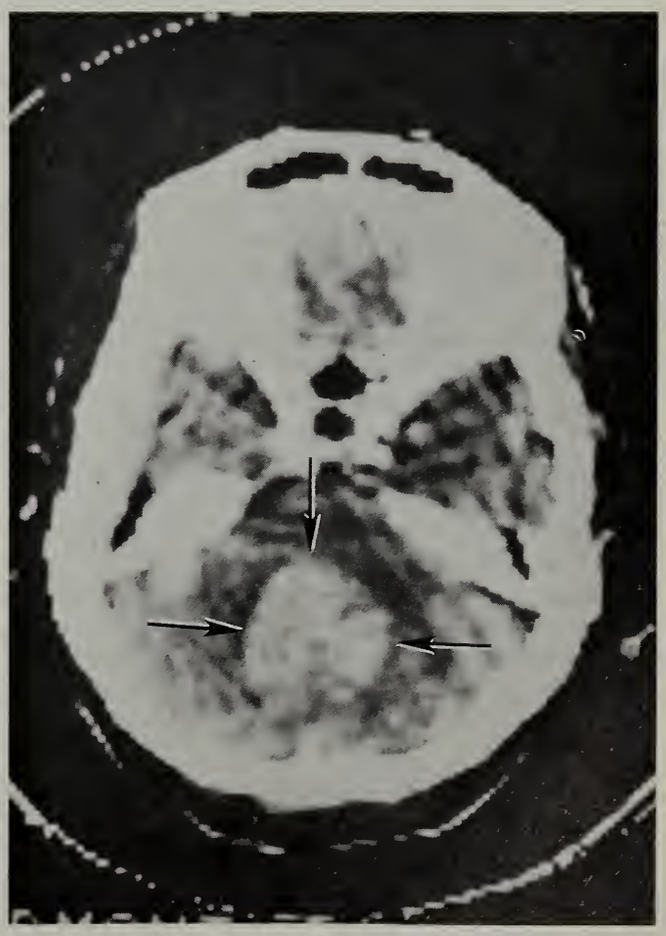


Fig. 2. CT scan of Case 2 shows huge midline cerebellar hemorrhage (arrows) blocking flow from ventricular system.

were associated with some decrease in ventricular size noted on a scan one month later.

Comment. Although this patient was suspected of having a subarachnoid hemorrhage from an intracranial aneurysm, it became apparent by CT scanning and negative angiography on two occasions that he had a large cerebellar infarct with hemorrhage. CT scanning showed a cerebellar infarct rather than a hematoma and, additionally, by serial scanning of ventricular size, ruled out the necessity for operative intervention.

Case 4.

An 85-year-old man was seen in consultation because of progressive obtundation and dysarthria. His examination showed constricted pupils and dysconjugate gaze with the right eye deviating laterally. Motor power was symmetrical and there were no Babinski signs. A CT scan showed a midline cerebellar hemorrhage, marked hydrocephalus and blood in the ventricular system. However, discrete mass lesions were present in the right temporal and left posterior frontal lobes, and chest X-ray showed a right lower lobe lesion compatible with carcinoma of the lung. The patient expired shortly thereafter.

Comment. In this case the diagnosis of the cerebellar hemorrhage was made by CT scanning. Lumbar puncture, angiography and other studies were never indicated. Operative intervention was not offered because the patient had evidence of widespread metastatic disease.

Case 5.

A 65-year-old woman was admitted to Memorial Hospital after developing severe headache, confusion, lethargy and staggering. Her examination showed nuchal rigidity, dysarthria, a slight right facial weakness and a right sixth nerve palsy. Strength and sensation were normal bilaterally. The initial study was a CT scan which showed an area of softening in the right cerebellum with blood over the posterior aspect of the cerebellar surface. Slight ventricular dilatation was present but prominent sulci also remained. Spinal puncture confirmed the presence of hemorrhage. Femorocerebral angiography showed normal anterior circulations and an arteriovenous malformation arising primarily from the right superior cerebellar artery (Fig. 3). Supportive care, routine subarachnoid hemorrhage measures, lumbar punctures and followup scanning were done, with good recovery of the patient allowing subsequent excision of the malformation.

Comment. Clinical evaluation of this patient suggested a posterior fossa hemorrhage. The fact that CT scanning showed this to be an infarct with minimal hemorrhage was obviously helpful in defining the subsequent management.

Discussion

Although perhaps 5-13%[5,6] of all spontaneous intracranial hemorrhages may involve the cerebellum, disproportionately few series describing effective management have been presented. Indeed, prior to 1965 fewer than 50 cases of surgically treated cerebellar hematomas had been reported in the literature, the first having been a single case described by Ballance in 1906.[7] In 1965, Fisher and associates[8] provided a comprehensive review of the diagnosis and surgical treatment of acute cerebellar hemorrhage. They mentioned the various etiologies: hypertension, angiomatous malformation, bleeding diathesis (including anticoagulation therapy), trauma, and infarction with secondary hemorrhage. Emphasis was placed on the fact that surgical treatment was hindered primarily because of the difficulty in establishing the diagnosis of cerebellar hemorrhage early in its course. Therefore, an attempt was made to delineate the clinical syndrome more accurately. Prominent symptoms included: sudden headache, dizziness or vertigo, repeated vomiting, and inability to stand or walk unaided. Reliable signs included: some alteration in consciousness, hypertension, normal or constricted pupils (constriction being ipsilateral to the side of the lesion), paresis of conjugate lateral gaze or sixth nerve paresis, skew deviation, horizontal nystagmus, a peripheral type of facial weakness (also ipsilateral to the side of the lesion), cerebellar ataxia (especially affecting stance and gait) and the absence

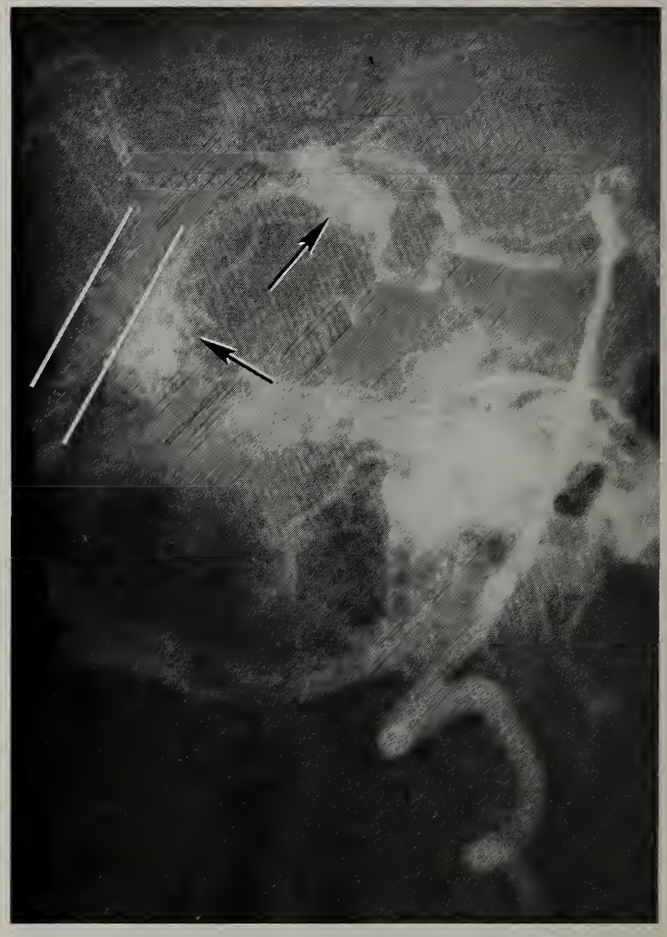


Fig. 3. Lateral view of right vertebral angiogram of Case 5 shows arteriovenous malformation (arrows) being fed from superior cerebellar artery. Early filling of straight sinus with contrast material is evident between lines.

of hemiparesis or sensory abnormalities. Babinski signs, usually bilateral, were present at the onset of the period of rapid deterioration. Urinary incontinence was also frequent.

It should be pointed out, however, that a clinicopathologic study by Sypert and Alvord[9] described exactly the same findings in patients having cerebellar infarcts. Less frequently patients with cerebellar infarcts may also require surgical decompression due to edema and brainstem compression.[10]

In the past, the finding of blood in the cerebrospinal fluid has been almost indispensable to reaching the correct diagnosis; as with any cerebellar mass, however, lumbar puncture predisposes to a cerebellar pressure cone, and unquestionably some patients have died as a direct result of lumbar puncture as well as from ventricular tapping.

Improvements in radiographic analysis[11] have produced reliable angiographic findings for the presence of a cerebellar mass or vascular malformation but cannot reliably differentiate hematoma from infarction and edema. Angiography, when time permits, certainly should be done in view of the occurrence of vascular malformation as a cause of cerebellar hemorrhage. Nuclear brain scanning has been unrewarding in diagnosing acute intraparenchymatous hemorrhages and infarcts, being more helpful several days or weeks following the ictus.

Ott, Kase, Ojemann and Mohr[12] have reviewed 56 cases of cerebellar hemorrhage, reiterating the importance of the clinical appraisal of those patients who have a rapidly deteriorating and unpredictable course. Indeed, 17 of their patients with proven cerebellar hemorrhages were operated on without contrast studies. They also suggested that computed tomography may be the most accurate and reliable test when the diagnosis is suspected.

The reliability of clinical evaluation of cerebellar hemorrhage in a series of 33 patients reviewed by Rosenberg and Kaufman[13] was not so remarkable, however, and the authors concluded that contrast procedures are necessary to confirm the diagnosis and avoid unnecessary surgical explorations. In their hands, ventriculography was the most definitive diagnostic procedure, but vertebral angiography was also recommended.

Our experience with CT scanning in the management of cerebellar hemorrhage has been, to say the least, quite helpful. Two major points to be made for its support are: First, a rapid definitive diagnosis of the offending lesion can be made. Second, lumbar puncture and ventricular tapping, both potentially lethal procedures in the patient with acute cerebellar hemorrhage, can be avoided.

Summary

We have reviewed the clinical syndrome of acute cerebellar hemorrhage and have presented five cases of cerebellar hemorrhage of various types in which CT scanning was a significant aid in management. Recognizing the clinical syndrome, establishing the diagnosis rapidly by CT scanning, and avoiding potentially lethal diagnostic procedures, are all of crucial importance in expediting surgical treatment and improving the morbidity and mortality associated with this entity.

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Spinal Fusion for Chronic Low Back Pain

Curtis V. Spear, MD, Joel Andrew Mason, MD, Sterling R. Williamson, MD, Robert S. Neff, MD, Lionel J. Comeaux, MD, and Frank W. Gwathmey, MD,
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Results of spinal fusion for chronic low back pain in 46 patients are analyzed, and the authors set forth the clinical circumstances in which the procedure may relieve this common complaint.

ONE of the most common complaints an orthopedist has to evaluate is back pain. Many patients, often obese or with compensation problems or with definite psychological overlay or who have had previous surgery, continue to have pain with little or no response to the common modalities used. Often there are degenerative changes, possibly explaining the patient's prolonged symptoms. There are also often mild structural abnormalities involving the lower lumbar spine, possibly explaining continued symptomatology.

The purpose of this study was to evaluate the preoperative clinical findings, type of surgery performed, postoperative course and results of patients having spinal fusions between 1962 and 1975. An attempt was made to re-evaluate with current x-rays all patients with more disabling symptoms. A comparison was made of the statistical findings of these patients with other studies obtained from a larger series.

Plan of Study

A total of 72 patients had lumbar fusions with 78 procedures being performed. Of these, 46 patients were evaluated by telephone and classified as to their results by an independent examiner. The classification used was similar to that advocated by Stauffer in the Mayo Clinic Series[1] and Thompson in the New York Series.[2] This classification was modified by adding Grade 1 for excellent results. Stauffer and Thompson felt that they should exclude an excellent grade from their classification because of the implication that a virtually normal group could be obtained clinically, when in essence this is unlikely with surgery of this type.

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Results of Study

There were nine patients with Grade 1 symptoms. Four of the patients had no qualifications and stated that they had no discomfort since recovering from

Table I. Classification

Grade 1 (Excellent):
1. No back discomfort or pain.
2. No medication for back.
3. No rest time necessary.
Grade 2 (Good):
1. Minor episodes of low back pain.
2. Requires several hours of rest. Local heat. ASA.
3. Returned to pre-symptomatic employment.
Grade 3 (Fair):
1. Pair moderate requiring more than 24 hours of rest. Non-narcotics.
2. Not returned to former occupation.
3. Doing other type work.
Grade 4 (Poor):
1. Moderately severe pain.
2. Not able to do any work.
3. Narcotics for pain.

their surgery. Five patients in this group had occasional mild discomfort, either after sleeping in the prone position or after carrying out heavy or extremely strenuous work. Eighteen patients were placed in the Grade 2 classification and were classified as having a good result. Fourteen patients were classified as having only a fair result and had to change their type of employment because of excessive time lost from work when they returned to their former occupations. Five patients were classified as having a poor result; these patients were unable to carry out any type of work and preferred to have narcotics for pain. When Groups 1 and 2 were combined, we found that 59% of the patients in this study compared favorably with a comparable group in the New York Series when patients with and without pseudoarthrosis were evaluated. This classification does not take into consideration those patients who did not return to work because of difficulty in carrying out manual labor with residual low back pain. These patients were classified in Grade 4, although their symptoms did not require the use of narcotics. This classification also does not take into consideration a lack of motivation or emotional overlay.

A study of distribution reveals that this study had more patients in Grade 3 and less in Grade 2 than the Mayo Clinic Series. This could be explained partly by a larger percentage in our study of patients who had had previous back surgery. These patients probably had a lower educational level than the patients in the Mayo Clinic Series. A closer correlation would have been seen if more emphasis had been placed on the degree of discomfort, eliminating factors secondary to emotional overlay.

The most frequent indication for surgery was pain following previous disc surgery with 17 patients in this group. Sixteen patients had narrowing of the lumbosacral joints. Eleven patients had a spondylolisthesis with disabling symptoms. Seven patients had narrowing of L4-L5 joints. It was impossible to determine the number of patients that had an articular type of spondylolisthesis as this terminology was not used during the initial part of the study. Seven patients had chronic localized low back pain with five having minor congenital abnormalities in the lower lumber region. Six patients presented with a pseudoarthrosis and appropriate symptoms.

During the early part of this study, there were several patients with chronic low back pain who had fusions with no x-ray abnormality present. These patients were said in the operative note to have an unstable L5 vertebra. This classification was not used during the major portion of this study.

The majority of the patients having Hibbs fusions were operated on during the earlier part of this period. Both patients having a Hibbs-type fusion without an autogenous bone graft had required a refusion for pseudoarthrosis. The vast majority had postero-lateral fusions combined with a Hibbs fusion with an autogenous bone graft being taken through the same incision. We performed our postero-lateral fusions through a midline incision. The dissection was taken down sub-periostally, exposing the posterior elements. The sacrospinalis muscle was retracted laterally to expose the transverse process. Thin petals of bone were then raised with a Cobb gouge from the spinous process and lamina with an attempt being made to keep intact the lateral portion of the strip. Strips were then raised from the superior aspect of the ala of the sacrum. The lateral process was decorticated as also was the medial wall of the gutter consisting of the lateral part of the articular process and pars inarticularis. From all patients, cancellous bone was taken through the same incision and through a transfacial subcutaneous dissection from the posterior iliac crest. Thin strips were obtained and these were then packed into the gutter extending from the transverse process to the sacrum. An osteotome was then used to remove the articular surface of the epiphyseal joints and cancellous bone was then packed into this area. A hemivac was used commonly during the latter period evaluated.

Even though we performed, in this series, postero-lateral fusions extending from L4 to S1 for spondylolisthesis involving the pars inarticularis of L5, we will probably in the future follow the suggestions of Wiltse[3] and perform an L5-S1 fusion unless there is marked anterior slippage of L5, or the transverse

Table 2. Classification of Results

	No. patients	Spear et al	Stauffer et al	Thompson et al (without pseudoarthrosis)	Combined groups
Grade 1 (Excellent).	9	59%	72%	90%	61%
Grade 2 (Good).	18				
Grade 3 (Fair).	14	30%	18%	7%	19.5%
Grade 4 (Poor).	5	11%	10%	3%	19.5%
	46				

process of L5 is small. We agree that the majority of patients with spondylolisthesis do not need a fusion.

During the earlier part of the study, many patients with two-segment fusions and those that had had previous surgery were immobilized with a plaster cast extending down to the knee region. Patients with postero-lateral fusions, except those that had had previous fusion surgery, were fitted with a corset with ambulations begun during their hospital period.

Fifteen patients were classified with Grade 3 and Grade 4 symptoms and were re-examined, and three were found to have definite motion at one level involved in the fusion. Antero-posterior films with the patient bending to the left and right clearly showed motion of a significant degree. They showed no motion in the lateral views taken with flexion and extension of the lumbar spine. We found this way of measuring motion more difficult to evaluate, especially if a slight scoliosis was present in the lower lumbar area. Patients that were obese were found to be more difficult to evaluate with lateral films because of the inability to see clearly the vertebral bodies for measurement. Rothman[4] stated that physical findings are of limited help in making the diagnosis of pseudoarthrosis. Three patients had no motion on bending films, but showed with a metal marker placed over the painful area of the back on examination, the site of pain to be the joint allegedly fused. These patients had an exploration of their fusion discussed.

Even though laminograms may be of value, we feel as others that laminograms and bending films are of limited value in showing pseudoarthrosis. We feel that the surest way to evaluate a suspected pseudoarthrosis is to explore the fusion site. Five patients in this study showed varying degrees of emotional overlay and probably have a significantly low pain threshold. These patients all had no motion on bending x-rays. Three had definite trebecular crossing of the fusion site as seen in oblique films making a pseudoarthrosis doubtful. Other causes for pain were arthritis of the hip joint, misinterpreted as giving pain in the low back area, and new bone formation above the fusion site explaining pain most likely in this area.

McNab[5] has stated that pressure on the peritoneal sac may obstruct the return of blood in the vana cava. This can divert venous return from the lower limbs partly through Batson's pelxis which increases operative bleeding. We have attempted to decrease operative hemorrhage, therefore, by placing heavy supports under the patient's chest and lateral abdominal areas so that the intra-abdominal pressure will be relatively minimal. McNab has also pointed out that each lumbar artery gives off an inter-articular, two superior and one inferior articular branches to the epiphyseal joint area. There is also a long branch which runs along the anterior surface of the transverse process. Demonstrations of these fairly constant muscular articular branches of the lumbar arteries and cauterization materially cuts down operative bleeding.

Summary

- Patients with chronic low back pain should have:
  1. A thorough evaluation.
  2. Repeated physical examinations.
  3. Conservative therapy including:
     a. Immobilization with a corset or
     b. If necessary, a chair-back type brace.
  4. Exercises may play a positive role in the treatment of patients with low back pain with limited motion of their lumbar spine, poor muscle tone, and tight hamstrings.

  Only those patients with localized narrowing of the lower lumbar interspaces or spondylolisthesis, who have consistently noted a material improvement in their symptomatology with immobilization, with recurrence of pain when not using their back supports, should be considered for surgery.
- Disc explorations should have a concomitant fusion considered only when they:
  1. Are associated with localized degenerative changes at the same level.
  2. Are associated with a long history of low back pain lessened with immobilization with a support.
  3. Are associated with radiological evidence of spondylolisthesis at this level.
  4. Have had previous exploration at this level, and a current exploration shows no disc abnormality.

  Only those patients with spondylolisthesis who are in Grade 3 and 4 or those who have had sufficient pain and disability which is helped with a back support should have a surgical fusion.

  Those patients performing heavy type work who are considered as candidates for a fusion should be urged before their surgery to have retraining for lighter work with surgery only being performed if their symptoms continue with lighter work.

  Patients with a questionable pain threshold or emotional overlay should have a Minnesota Multi-Phase Personality Inventory evaluation.

  Those patients requiring fusion should have a combined postero-lateral and Hibbs fusion, with obliteration and bone grafting of the epiphyseal joints. Efforts should be made to minimize hemorrhage.
- All patients continuing to have pain following a fusion should have:
  1. An x-ray examination including obliques to vi-



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sualize the fusional mass or defect in this area.

2. Bending films, carefully evaluated.

Those patients continuing to have back pain following their fusion having normal bending films, may require an exploration of the spinal fusional mass, as this may reveal a pseudoarthrosis as the cause of their symptoms.

Other causes for the pain may be apparent when the patient is evaluated with current x-rays including obliques and laminograms.

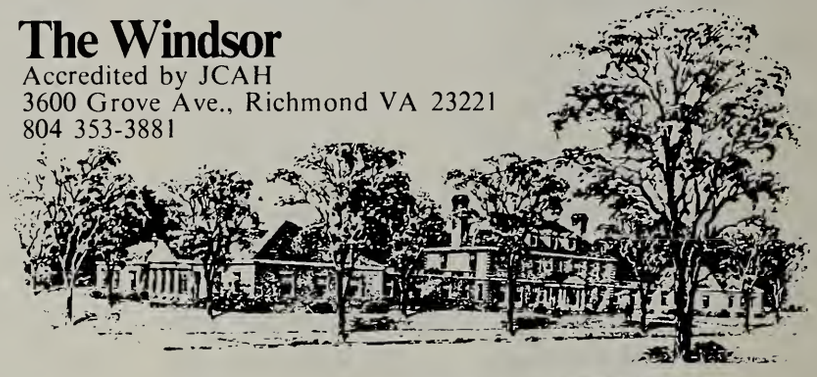
Although fusion of the lower lumbar spine with the technique described may be of value, it is obvious that it is not the answer to all patients with chronic low back pain.

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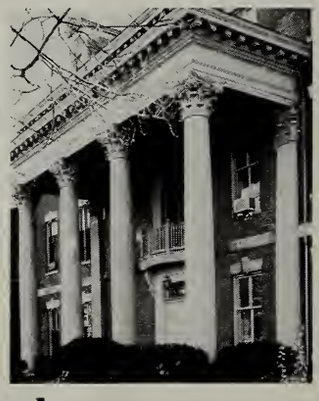
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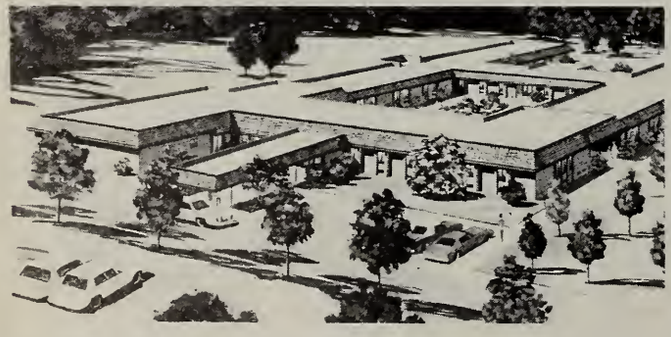
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ABSTRACTS

A four-state regional meeting of the American College of Physicians drew physicians from Virginia, Maryland, Delaware, and the District of Columbia to Williamsburg on October 6-8. These abstracts are of papers presented at that meeting by Virginia physicians.

Acute Gastrointestinal Illness in Charlottesville: a Prospective Family Study. JAMES HUGHES, MD, JACK M. GWALTNEY, JR., MD, D. H. HUGHES, and RICHARD GUERRANT, MD, *Charlottesville.*

A prospective study of all acute gastrointestinal illnesses (AGI) was conducted in Charlottesville by continuous surveillance of suburban families for 2 yr; 43 families (159 members) participated and kept daily records of symptoms. When AGI occurred, fecal swabs were placed in Cary-Blair transport medium for plating on MacConkey, SS, and TCBS agars. Coliform bacteria were tested for production of heat-labile enterotoxin (LT) in the CHO assay, for production of heat-stable enterotoxin (ST) in the infant mouse, and for invasiveness in the Sereny test. Control specimens were obtained from participants when they were asymptomatic; these were processed similarly.

AGI was defined as diarrhea, vomiting, or milder intestinal and systemic symptoms. The attack rate (AR) was 1.9 AGI/person/yr. Children under 3 yr had the highest AR (2.5 AGI/person/yr). Peak incidence of AGI was in November, December, and January, when 56% of the family clusters (>2 illnesses within 1 wk) occurred.

Specimens were obtained from 176 (76%) of AGI cases with diarrhea. LT-producers were isolated from only 7% of cases and 3% of controls; ST-producers were isolated from 7% of cases and controls. No invasive *E. coli*, salmonellae, shigellae, or vibrios were found. Rotaviruses were present in 10% of stool specimens obtained from patients ill in family clusters.

In this suburban U.S. population, approximately 2 episodes of AGI occur per person each year. Illnesses occur most often in young children and tend to occur in winter months and in family clusters. While *E. coli* are responsible for much AGI in travelers and in populations of developing countries, they are not significant causes of AGI in Charlottesville. Rotaviruses may be responsible for at least 10% of AGI cases.

Signs of Left Ventricular Dysfunction (LVD) in the Intensive Care Unit (ICU): a Reassessment. GEORGE W. BURKE, MD, KIRAN B. SAGAR, MD, JAMES A. L. MATHERS, MD, ORHAN MURAN, MD, and FREDERICK L. GLAUSER, MD, *Richmond.*

Previous studies have suggested that bedside right heart catheterization may be the only dependable means of detecting LVD in many critically ill patients. We prospectively evaluated 38 ICU patients consecutively undergoing bedside right heart catheterizations. Immediately prior to catheterization, specific physical findings, interpretations of chest roentgenograms and electrocardiograms, and precatheterization provisional diagnoses were recorded at the bedside. In 17 subjects, catheters were inserted to aid in management of fluid replacement or afterload reduction; in 21, they were inserted to rule out LVD. In the latter group, provisional diagnoses were contradicted by hemodynamic data in 55% (12). In both groups, the triad of elevated jugular venous pulsations, cardiomegaly, and S_3 gallop correlated with elevated pulmonary capillary wedge (PCW) pressure (>12 mmHg), whereas the absence of all three conditions correlated with normal PCW. Retrospective application of these criteria to the subgroup of 13 patients with respiratory failure and bilateral alveolar infiltrates resulted in a correct classification of all subjects with presence or complete absence of this triad. These results confirm the difficulty in distinguishing LVD by conventional clinical criteria in the ICU, yet they reemphasize the value of certain combinations of laboratory and physical signs in detecting LVD in acute respiratory failure and other acute disorders.

Evaluation of Thallium-201 Stress Scintigraphy for Detection of Coronary Artery Disease. GEORGE A. BELLER, MD, DENNY D. WATSON, PHD, BRUCE C. BERGER, MD, LAWRENCE R. BURWELL, MD, GEORGE B. CRADDOCK, MD, and CHARLES D. TEATES, MD, *Charlottesville.*

The aims of this study were (a) to compare the sensitivity of thallium-201 (T1) imaging during exercise with stress electrocardiography and (b) to determine the accuracy of T1 imaging in identifying the presence of multivessel coronary artery disease (CAD). Accordingly, 22 patients referred for coronary angiography for evaluation of chest pain underwent treadmill exercise testing. At peak exercise, 1.5 mCi of T1 was given IV, after which myocardial imaging in anterior and LAO projections was performed over 2-3 hr. Computer-generated T1 scintigrams were blindly interpreted by 2 independent observers who had no knowledge of the angiographic findings. Of the 22 patients studied, 18 (82%) had significant CAD (>50% stenosis), while 4 had none. Only 8 of the 18 patients with CAD (44%) had a positive ST segment response (≥1 mm depression) at peak exercise, whereas 17 of 18 (94%) had abnormal T1 scintigrams demonstrating 1 or more segmental perfusion defects. T1 scintigraphy correctly identified multivessel CAD in 8 of 12 patients (67%) with stenoses in 2 or more major vessels. Intense lung uptake of T1 at peak exercise was observed in 6 patients, 5 of whom had 3-vessel CAD. The 4 patients with normal coronary arteries had normal T1

scintigrams during exercise stress.

In summary, (a) Tl exercise scintigraphy with computer processing is highly sensitive in detecting CAD in patients with chest pain when compared to exercise electrocardiography; (b) multivessel CAD was correctly identified in 67% of patients; and (c) abnormal lung uptake of Tl during exercise may be a marker of severe CAD, reflecting exercise-induced transient left ventricular failure.

Immunotherapy of Lung Cancer with BCG and Allogenic Tumor Cells. James W. Reid, MD, *Portsmouth;* Charles Miller, MD, and Johannes Blom, MD, *Washington, DC;* Ronald B. Herberman, MD, Elliott Perlin, MD, Guy Bonnard, MD, James Weese, MD, Grace Cannon, PhD, and Robert Connor, PhD, *Bethesda, Maryland.*

To ascertain whether BCG and allogenic tumor cells prolong the disease-free interval and survival in Stage I and II post-thoracotomy lung cancer and to identify immune parameters predictive of relapse, we initiated an immunotherapy trial in Stages I and II non-oat cell post-thoracotomy lung cancer patients. Survival and disease-free interval were used as clinical parameters. Randomization arms were control (no therapy), BCG alone, and BCG plus allogenic tumor cells every 2 wk until relapse or 2 yr. BCG was administered intradermally by Heaf gun and allogenic tumor cells were administered intradermally and subcutaneously. Immune parameters followed every 2 wk were lymphocyte stimulations, LMI, and T rosettes.

There are 32 patients in the study. Median survival for TINOMO patients is 700 days for controls and not reached at 1320 days for BCG-treated patients ($p = .008$). Median survival for stages I and II (combined) is 700 days for controls and not reached at 1300 days for BCG patients ($p = .047$). The percent of patients whose lymphocytes formed T rosettes with sheep rbc at 29°C consistently fell below or failed to rise above 47% prior to relapse, but remained above that figure in long term survivors. On PHA stimulation, lymphocytes consistently showed a blunted response prior to relapse. Immunotherapy toxicity was minimal.

Immune stimulation with BCG is effective in prolonging high quality survival in patients with resectable lung cancer. Rosette formation and PHA stimulation are reliable predictors of relapse in patients with resected lung cancer.

The Changing Spectrum of Inherited Defects of Polymorphonuclear Function. Peter Densen, MD, and Gerald L. Mandell, MD, *Charlottesville.*

The vast majority of patients presenting with a history of recurrent infections have no definable defect in human or cell-mediated immunity. Patients with definable defects in polymorphonuclear function classically present in childhood with recurrent and prolonged infections involving the skin and lungs. Death at an early age is not uncommon. However, these defects are now being recognized in adults, necessitating diagnosis and management by the general internist. There are two categories of inherited neutrophil dysfunction: defects in chemotaxis and defects in microbicidal activity. In the past 12 yr the diagnosis of a primary defect in neutrophil function has been made in 10 patients at the University of Virginia.

Two chemotactic disorders, Chédiak-Higashi syndrome (CHS) and the hyperimmunoglobulin E syndrome (HES), were diagnosed in 3 patients from 2 families. The 2 CHS patients presented for management of severe pyoderma which had been recurrent since age 3 mo and 11 yr, respectively; both had had multiple episodes of pneumonia during childhood. The patient with HES had multiple skin infections and eczema.

Chronic granulomatous disease (CGD), a defect in neutrophil microbicidal activity, was recognized in 7 patients from 3 unrelated families. The index case in each of the families presented with a history of recurrent or chronic pneumonia. All 7 patients with CGD had a history of multiple pneumonias; 4 had pulmonary fibrosis on chest x-ray and 2 had unexplained visceral abscesses.

All 10 patients are living; 2 are mentally retarded and 2 have severe pulmonary fibrosis. The diagnosis and management of these patients with defects in neutrophil function will be discussed.

Successful Therapy of Acute Crescentic Rapidly Progressive Glomerulonephritis (AC-RPGN) with Pulse Methylprednisolone and Oral Steroids. W. K. Bolton, MD, *Charlottesville,* and W. G. Couser, MD, *Boston, Massachusetts.*

Idiopathic AC-RPGN with oliguria, proteinuria, and a rapid decrease in renal function is usually associated with a high mortality rate, lack of spontaneous recovery, need for dialysis, and unresponsiveness to all modes of therapy. We saw 9 patients who presented with RPGN of less than 1 mo duration and documented decrease of more than 60% in creatinine clearance. Renal biopsies in all 9 patients were studied by light, electron, and immunofluorescence microscopy. Patients with vaculitis, postinfectious GN, SLE, and Wegener's granulomatosis were excluded. Idiopathic, non-immunoglobulin-mediated AC-RPGN was present in 6 patients, immune complex disease in 2, and anti-GBM disease in 1. Male to female ratio was 7:2 and mean age was 51.7 yr. All had kidneys of normal size and all were proteinuric, 6 of 9 were oliguric, and 5 of 9 required dialysis. All patients were treated with pulse intravenous methylprednisolone, 30 mg/kg, for 3 days; treatment with high dose oral steroids followed. Serum creatinine fell in 7 of 9 patients within 1 to 4 wk after pulse; 3 of the 5 patients on dialysis no longer required it, and 6 of the 9 are still maintained on oral steroids off dialysis 3 to 24 mo after pulse. The mean creatinine of 10.4 ± 2.2 mg/dl before therapy decreased between 3 and 24 mo later to 2.8 ± 0.6 mg/dl in those 6 patients. Two patients died of causes unrelated to therapy 1 and 4 mo after pulse. Tissue obtained from 1 patient 4 mo after pulse therapy showed resolution of crescents.

We conclude that pulse methylprednisolone therapy of AC-RPGN is often followed by a marked and sustained

improvement in renal function rarely seen with other modes of therapy. Our findings suggest the need for controlled studies.

Etiology and Antimicrobial Therapy of Acute Maxillary Sinusitis. JACK M. GWALTNEY, JR., MD, MERLE A. SANDE, MD, AUSTIN SYDNOR, JR., MD, DANIEL L. SEALE, MD, and BRUCE H. HAMORY, MD, *Charlottesville.*

We studied 81 patients with symptoms of acute sinusitis. We used direct needle puncture and aspiration of the maxillary sinus (105 sinuses). *Streptococcus pneumoniae* (34%) and *Hemophilus influenzae* (30%) accounted for the largest percentage of diagnosed infections in which bacteria were recovered in titers of $\geq 10^4$ CFU/ml. Other bacteria recovered were anaerobes (12%), *Neisseria* species (8.5%), *Streptococcus pyogenes,* α hemolytic streptococci, and non-group A β hemolytic streptococci (3% each), *Pseudomonas aeruginosa,* and *Escherichia coli* (2% each). Viruses isolated from 11 sinus aspirates included 6 rhinoviruses, 3 influenza A_2 viruses, and 2 types of parainfluenza virus. Mixed bacterial-viral infections were present in 4.7% of all sinuses examined. The clinical efficacy of oral ampicillin, amoxicillin, and trimethoprim-sulfamethoxazole were compared by follow-up puncture after a course of therapy. Failure of therapy correlated with in vitro antimicrobial resistance of the infecting bacterium or failure to take medication. Sinus radiography was an accurate technique for diagnosis of acute infection of the antral sinus. A significant correlation was shown between abnormal radiographic findings (air-fluid level, opacity, or mucosal thickening) and positive bacterial and/or viral culture.

National Cooperative Crohn's Disease Study (NCCDS): Response of Subgroups to Drug Treatment. D. M. SWITZ, MD, and A. M. ZFASS, MD, *Richmond;* R. W. SUMMERS, MD, *Iowa City, Iowa;* J. T. SESSIONS, MD, *Chapel Hill, North Carolina;* and J. W. SINGLETON, MD, *Denver, Colorado.*

Further analysis of NCCDS results since their summary presentation in 1977 yields the following. In Part I, patients with active symptomatic disease, those with disease involving only the ileum, responded to prednisone (P) better than to placebo (PL) ($n = 51$, $p = .002$). Sulfasalazine (S) and azathioprine (A) proved no better than PL for this group ($p = .617$, $p = .254$). Patients with active symptomatic involvement of the ileum and colon responded to both S and P better than to PL ($p = .027$, $p = .008$), but A was not superior to PL in this group ($p = .809$). A small group of patients with active involvement of only the colon responded only to S ($n = 17$, $p = .006$). In 99 patients with active disease taking S at randomization, no drug was better than PL, but, in 196 patients not taking S at entry, P and S were superior to PL ($p = .001$, $p = .017$). In 47 patients with active disease of recent onset (less than 6 mo), no prior drug treatment, and no prior surgery, S was superior to PL ($p = .04$). However, in 248 patients with active disease who had had prior medical and/or surgical treatment, both P and S were better than PL ($p = .001$, $p = .015$).

In Part II, in which 274 patients with quiescent disease of 1-2 yr were followed for evidence of recurrence or flareup, no drug was superior to PL in maintaining remission. In a subgroup of 48 patients who had surgical extirpation of all disease within 1 yr of entry, those on any study drug tended to do less well than those on PL; the difference was partly due to drug side-effects. Finally, in the entire group of 569 study patients, there was no difference in response of immunocompetent patients (1-5 positive skin tests) vs anergic patients (no positive skin tests) to any drug or PL. None of 9 extraintestinal manifestations responded to any drug as compared with PL. ■

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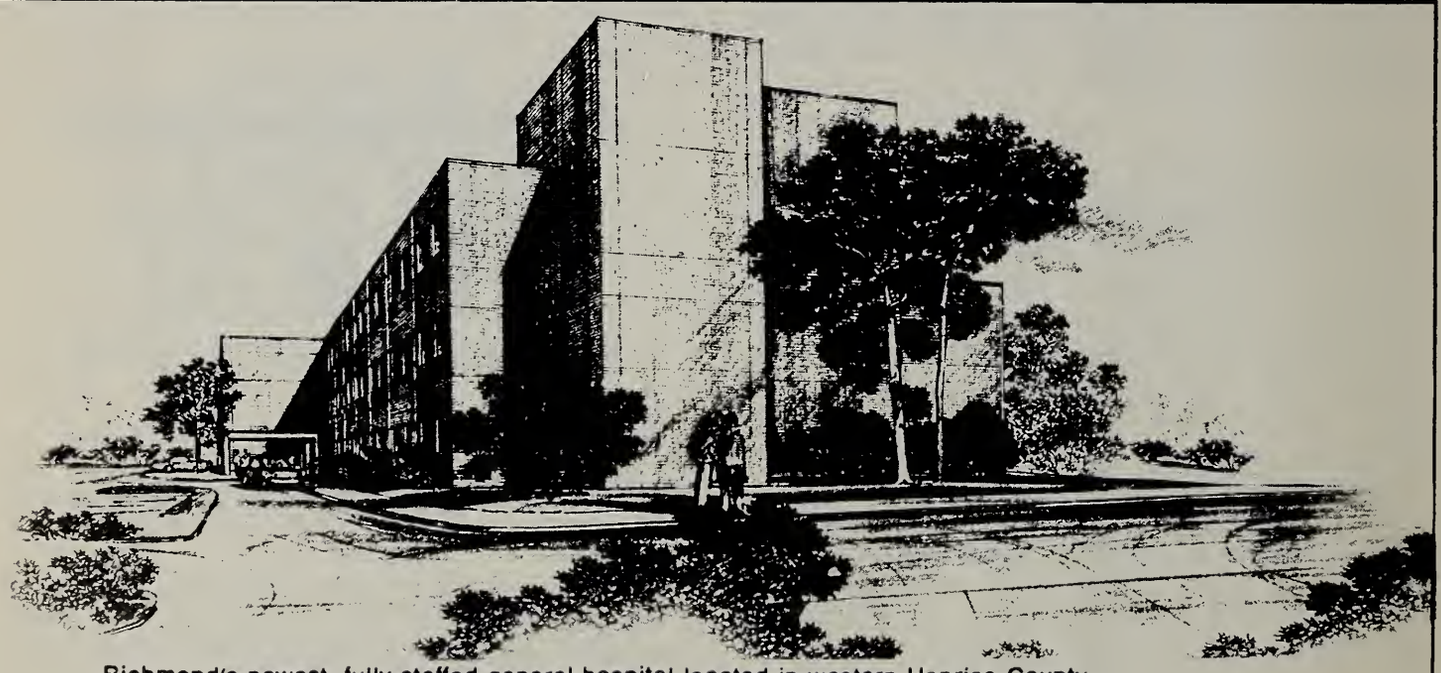
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EDITORIAL

Physician Reporting of the Impaired Driver

JUST thirty years ago Dr. Fletcher Woodward reported his studies of the multiple factors contributing to death and injuries on the highways in his historic paper "Medical Criticism of Automotive Engineering". His paper heralded the modern multidisciplinary approach to traffic medicine. Subsequently, in his "Seven Medical Proposals for the Prevention of Injury and Death on the Highways", he elaborated the means to counter highway deaths and injuries. Five of the seven proposals dealt with medical fitness to drive. Dr. Woodward later chaired the AMA Committee that prepared the AMA "Physician's Guide for Determining Driver Limitations". This guide has been updated, and other states and provinces have developed guides, the most recent of which was published in 1978 by the North Carolina Department of Human Resources Division of Health Services.

Physical and mental states that impair judgment, slow reaction time, or suddenly alter the state of consciousness are incompatible with safe operation of a motor vehicle. Lesser states of disability may be compatible with licenses permitting travel only on certain routes or during certain hours. The identification of impaired drivers and evaluation of the extent of their disability is the responsiblity of family physicians, the Division of Motor Vehicles, and a medical referral committee. In Virginia, the Division of Motor Vehicles screens driver applicants by questionnaire and by eye exams to identify certain problems. The Medical Referral Committee, operating under the Commissioner of Health, evaluates problem cases. They key link, the family physician, is missing in this identification process in Virginia, where there is no law that enables physician reporting of the medically impaired driver. Virginia does require institutions to report the release of any person "whose condition, due to mental illness, mental deficiency, epilepsy, alcoholism or drug abuse, is such that, in the judgment of the superintendent, would impair the released patient in safely operating a motor vehicle".

The Medical Society of Virginia recommended that a law be enacted by the General Assembly of 1976 which would have enabled physician reporting of driver disabling medical conditions. A bill was introduced in that General Assembly session, but no law was passed. Now action by physicians is needed to bring this legislative need to the delegates and senators early enough so that it will be on the agenda in 1979. A workable reporting law would apply only to those who drive a motor vehicle. It would enable the physician to report driver-disabling medical disabilities while affording legal protection to the reporting physician. As of this writing there is no case on record of a successful suit against a physician who reported an impaired driver, but cases have been found against physicians who did not report impaired drivers who later caused fatal crashes.

Physicians alone have been delegated by the state to exercise skillful determinations of the state of health of the ill or injured and to advise on medical matters. A physician's records and reports are recognizd as legal documents. It follows that when the state of a person's health may cause his activities to conflict with his own safety or the safety of others, a physician may be expected to determine this condi-

tion and to submit a report of his findings. This is the process frequently encountered by physicians in the area of workmen's compensation, in the reports of communicable diseases to the Commissioner of Health, and in the reporting of gunshot wounds to police agencies. The principle of confidentiality of medical information is not abridged when it is necessary to protect the individual or the community. Alcohol impairment, neurological and mental disorders and medically restrictive states such as diabetes and cardiac disease, as well as fatigue, stress, and minor but temporarily endangering disease states which diminish driver attention comprise the largest groups of conditions that affect driving. Many of these are avoidable, reversible, or, through action programs, controllable. The desire and need to continue driving have been reported by Baldwin and by Waller to cause subjects under surveillance to practice better health habits or to better manage their medications, thus positively affecting their general state of health.

We are provided with the privilege to drive once we meet certain qualifications of the Division of Motor Vehicles of Virginia. We do not have a "right" to drive as such. However, there are certain rights of highway users that have not been adequately illuminated in the discussion of highway safety. Three of these are as follows:

1. The highway user has a right to protection of himself, his vehicle and others in his charge from illegal actions of other drivers.
2. As resolved by the sixth Conference of the International Association of Accident and Traffic Medicine in 1977, "Workers using the highways have a right to expect all efforts of government will be made to provide them with safe working conditions".
3. A child has a legal right to be protected in a hostile environment. Exposure of a child to an impaired driver is child neglect. In 1979, designated the "Internaional Year of the Child", all cases of child injury on highways should be afforded the same quality of investigation that the more publicized forms of child abuse are afforded. The multidisciplinary accident investigations (MDAI) should in my opinion, be extended to this area.

Automotive losses in contrast to many medical conditions are the killers and cripplers of the young. This is the leading cause of loss of useful life years. The monetary costs are staggering. The state of North Carolina reported the estimated cost of deaths and injuries for the year 1976 to be $812,000,000.

Thirty-five thousand Virginians and 1½ million people in the United States have died as a result of highway crashes since Dr. Woodward began his studies in 1946. Despite the extent of these losses, our prediction of death and injuries for the 1970's was less than half the number we projected in 1962. Changes in highway design and vehicle design and educational and remedial programs have shown the way to reduce these losses further.

The Highway Safety Committee of The Medical Society of Virginia strongly urges physicians to acquaint legislators with the need for legislation which enables the reporting of conditions medically endangering to the public and the individual, while providing legal immunity for the reporting physician. This measure will provide another of the "keys to survival on our highways."

JAMES C. ANDREWS, MD

801 East High Street
Charlottesville VA 22901

Have You Explored An Index Lately?

THE yearly index obligatory for professional journals and duly printed in this month's VIRGINIA MEDICAL may seem dry stuff, but it's not dry at all when you explore it. Look beyond the serried type at the diversity of topics, the quality of medical information, the emphasis on subjects distinctly Virginian that appeared in your journal in 1978. And look at all those splendid contributors, 226 of them! These are our "stars", those who have written for us medical articles, historical pieces, editorials, essays of opinion, book reviews, letters, memoirs. The Editors cherish each and every one. We value, too, the scores of splendid doctors who, though not indexed as authors, sent us communications about speeches worthy of publication, entries for the Who's Who and Virginia Authors departments, meetings for the calendar, and all the other news and clues that give this journal life. The Editors' mail is heavy with communications, and that's exactly the way we like it, for communicating is what this journal is all about.

Of all these communicators, none has demonstrated greater friendship and faith than Dr. P. M. Fitzer of Newport News, Virginia, our champion medical writer. As the index reveals, five medical articles written by Dr. Fitzer alone or with others have been published in these pages this year (one is on page 850 of this issue), and one is in type for early publication. Dr. Fitzer's writing is absolutely first-class, his choice of material unfailingly apt. He is an editor's delight, and we salute him. **A. G.**

VIRGINIA MEDICAL OBITUARY

Charles P. Cake, MD

Dr. Charles P. Cake, Alexandria, died of pneumonia September 23 at the National Orthopaedic Hospital in Arlington at the age of 77. He was a former president of the Arlington County Medical Society and former chief of the tuberculosis division of the Veterans Administration.

A native of Norfolk and graduate of the University of Virginia School of Medicine, Dr. Cake had practiced medicine in Washington and Arlington for more than 40 years. From 1934 to 1944 he was chief of the tuberculosis division of the District of Columbia General Hospital, and until his retirement in 1976 directed various chest clinics in Arlington operated by state and local authorities. During World War II he held the rank of commander in the Coast Guard and served in a Staten Island, New York, hospital.

Dr. Cake had also been president of the Southern Conference of Tuberculosis Workers. He had been a member of the Governor's Advisory Commission on Tuberculosis and was active in national and state tuberculosis associations. In 1956 he was the recipient of the Douglas Southall Freeman Award given annually to a Virginian for outstanding efforts in tuberculosis control. His membership in The Medical Society of Virginia spanned 50 years.

O. Kyle Burnette, MD

Dr. O. Kyle Burnette, family practitioner in Culpeper from 1929 until his retirement three years ago due to failing health, died September 20 at his Culpeper home. He was 76.

Dr. Burnette was graduated from the University of Richmond in 1922 and then served as principal of a Madison County high school for two years. He left that post to enter the Medical College of Virginia, graduating in 1929 and beginning his practice in Culpeper that year. He was a member of the Culpeper County Medical Association and the American Academy of Family Physicians and had belonged to The Medical Society of Virginia 48 years.

Louis Lovenstein, MD

Dr. Louis Lovenstein, retired Richmond physician, died October 22 at the age of 72. An internist and general practitioner, Dr. Lovenstein obtained his bachelor's and master's degrees from the University of Virginia and his medical degree from the Medical College of Virginia. He had been a member of The Medical Society of Virginia for 40 years.

Marion W. Fisher, MD

Dr. Marion W. Fisher, who retired in July because of illness after 25 years in the practice of pediatrics in Sandston, Virginia, died October 16 in a Richmond hospital. She was 60 years old.

Born in Wilmington, North Carolina, Dr. Fisher was graduated from the University of North Carolina at Greensboro and went on to the Medical College of Virginia, where she received her medical degree in 1950 and was subsequently assistant clinical professor of pediatrics. In addition to The Medical Society of Virginia, she belonged to the American Academy of Pediatrics, the Southern Medical Association, the Richmond Academy of Medicine, and the Fairfield Medical and Dental Association.

Memoir of Herbert C. Lee 1911-1978

By Elam C. Toone, MD, James O. Burke, MD, and Randolph Hoge, MD

Dr. Herbert Carl Lee was born in Madison, Wisconsin, on January 1, 1911, and died at his home in Richmond, Virginia, on June 27, 1978. The University of Wisconsin awarded him both his bachelor of arts and doctor of medicine degrees, and he remained a loyal alumnus of this institution thereafter.

In July of 1936 he came to the Medical College of Virginia as an intern on the surgical service of the late Dr. I. A. Bigger. This began a long affiliation of 40 years with this school until his retirement on January 3, 1976. After completing his surgical residency in 1941, he promptly joined the faculty of the School of Medicine as an associate professor in the department of surgery. Thereafter his rise was steady and progressive, culminating with the appointment as professor in 1964.

Dr. Lee was a superb surgeon, being particularly recognized for his skill and expertise in the management of diseases of the abdomen and gastrointestinal tract. He readily shared this knowledge and these

skills with the house staff and was recognized as an outstanding teacher.

In addition to these professional activities he served as chairman of the Hospital Records Committee for 30 years, was chairman of the Richmond Academy of Medicine committee which negotiated the group health insurance for its members and served both the School and the Academy in various other activities.

Among the many professional organizations to which he belonged were the Southern Surgical Association, the Southern Society of Clinical Surgeons, the Richmond Academy of Medicine, the Medical Society of Virginia, the AMA, and, as a diplomate, the American Board of Surgery. For many years he served as an active trustee of the Medical College of Virginia Foundation.

He was the author of several papers appearing in various medical journals and contributed chapters to three medical textbooks. In particular, he was most pleased to have been an invited speaker and an honored guest at the Alumni Association meeting of the University of Wisconsin in 1960.

Each of us have shared vicissitudes of varying degree in our professional, domestic, and personal lives, but it seems that Herb had more than his share of personal medical problems. In 1942 at the age of 31 years he was found to have a severe essential hypertension, which was treated successfully with a bilateral dorsal-lumbar sympathectomy. However, for the remainder of his life he was compelled to endure the many physiological disturbances resulting from so extensive surgery on his sympathetic nervous system. In 1968 he developed an acute empyema of the gall bladder. This was treated successfully, but the drain on his system was such that he was never able to return to his full duties in the operating room, although he continued to teach.

As much to be remembered as his professional contributions were the qualities of his personality. In 1942 he married Dovie Johnson Kinlaw of Lumberton, North Carolina, and with her raised two girls and two boys. A devoted family man, he was justly proud of his wife, children, five grandchildren and their home. He was a delightful companion, a warm and loyal friend, concerned and interested in the affairs of others with a large group of admirers from every walk of life.

Prepared and published at the request of the Richmond Academy of Medicine.

W. L. Taliaferro, MD

Dr. William L. Taliaferro, general practitioner in Norfolk for four decades, died October 3 in a Norfolk hospital. He was 66 years old.

A native of Hampton, Virginia, Dr. Taliaferro was a graduate of the College of William and Mary and the University of Virginia School of Medicine. During World War II he was a major in the 51st Medical Battalion in the Italian and North African campaigns.

Dr. Taliaferro was on the staff of the Diagnostic Tumor Clinic of De Paul and Leigh Memorial Hospitals, Norfolk, and had been president of the staff of Norfolk General Hospital. He closed his private practice last year because of illness but continued limited practice at the Veterans Administration Hospital, Hampton, and the US Public Health Service Hospital, Norfolk. He was a member of the Norfolk County Medical Society and the American Academy of General Practice.



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WHO'S WHO IN VIRGINIA MEDICINE

When **Paul Schlein, MD,** arrived in Mechanicsville, Virginia, recently to begin his practice of pediatrics, he found that construction on the building in which he was to have his office had not even been started, let alone completed. What to do? Simple. Dr. Schlein outfitted his 4-wheel-drive Scout as a mobile office and started a house call practice. That's news, for house calls have become as rare as the horse and buggy, and the Ashland *Herald-Progress* saluted Dr. Schlein with a feature story and the picture reproduced on this page.

There's nothing superficial about Dr. Schlein's house calls. He takes a nurse with him, and an effective range of medical equipment in the Scout also backs up his efforts. Accessible through the tailgate are an audiometer, baby scales, eye charts, a centrifuge and hemoglobinometer, a microscope with alcohol preps, lancets, slides, and ointments fitting nicely into a tackle box, an ice chest to keep medications cool, a CB radio for emergency calls, a portable patient file, and of course the traditional doctor's bag with instruments.

Parents in the area are delighted with the innovation, and Dr. Schlein finds a house call practice has distinct advantages. "The child is more relaxed in the home environment," he is quoted as saying. And, he notes, the home visit gives him the chance to really know the parents.

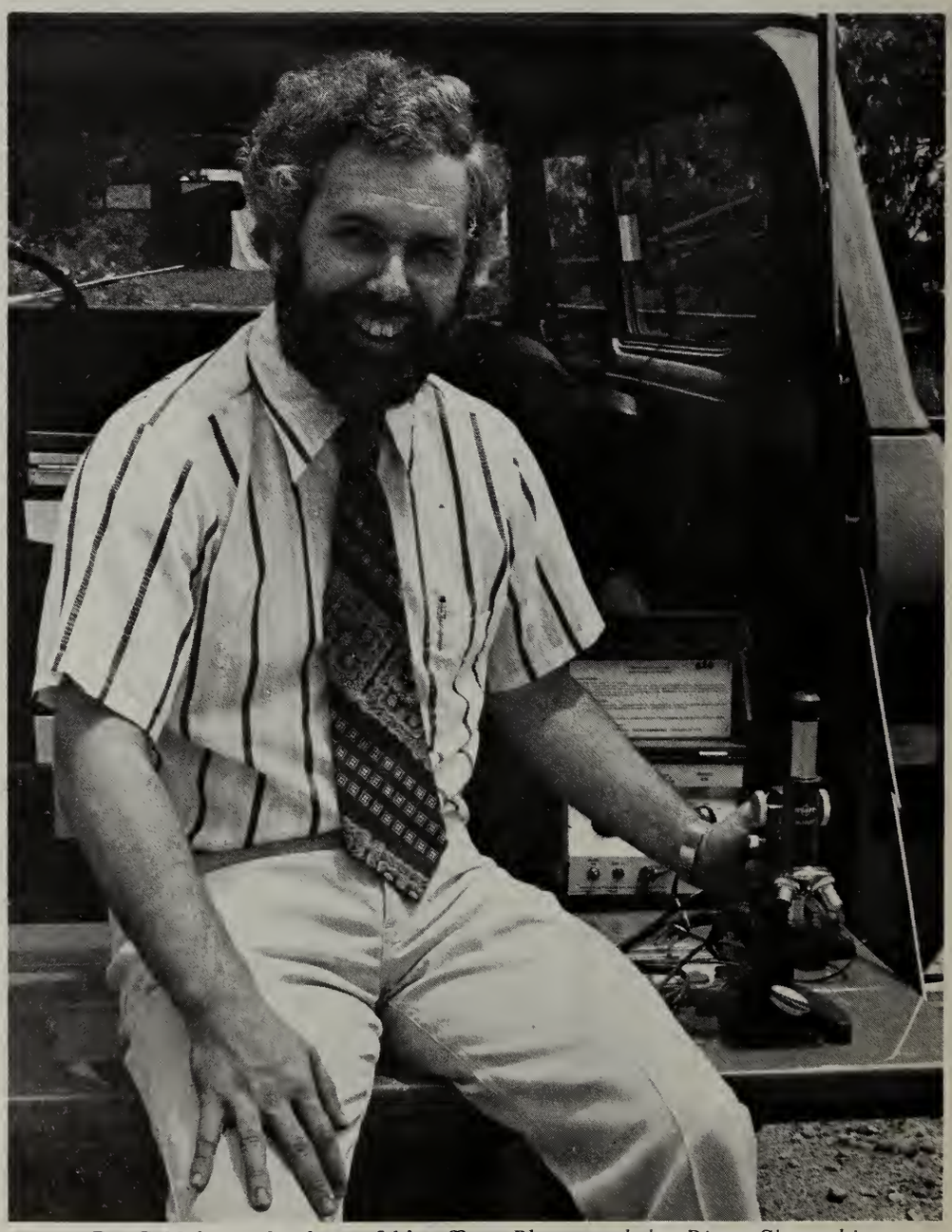
Dr. Schlein was graduated from the Medical College of Virginia in 1975 and completed his pediatrics residency there this year. He also has a PhD degree in research endocrinology from Purdue University. In addition to his house call practice, he is associated with a health department clinic and with Kenner Army Hospital at Fort Lee. And he's a new MSV member (see page 831).

Eventually there will be a conventional office, but for now, Mechanicsville has a needed pediatrician and Dr. Schlein is in business.

The Virginia Public Health Association, at its annual meeting in Roanoke, gave recognition to two *Richmond* physicians: Dr. **George M. Bright,** director of adolescent medicine at the Medical College of Virginia, who was instrumental in developing the Cumberland Farm for Adolescents in New Kent County, and Dr. **William E. Apperson,** director of the State Health Department's Bureau of Tuberculosis, who has been in TB control work in Virginia for 40 years.

New elected trustees of the Montgomery County Hospital are Dr. **Michael E. Slayton,** *Blacksburg,* and Dr. **James H. Smith,** *Christiansburg.*

The Fairfax Hospital Association has elected Dr. **Herbert E. Lane, Jr.,** *Falls Church,* to its board of trustees.



Dr. Schlein at the door of his office. *Photograph by Diane Slusarski.*

WHO'S WHO IN VIRGINIA MEDICINE

For the first time in its history Virginia Beach has a city physician. He is **Richard E. Easton,** who lives and practices in that city and is on the faculty of the Eastern Virginia Medical School in Norfolk as well. He was appointed to the newly-created post by Dr. **George C. Sjolund,** director of the Virginia Beach Health Department.

Dr. **Bedford H. Berrey** has been named to two state posts: assistant commissioner of the Virginia Department of Health and director of the Department's recently created Office of Health Care Programs. Dr. Berrey is a retired US Army colonel and previously served as director of the Peninsula Health District, Newport News.

New regional health director for Southwest Virginia is **Dr. Mary Tom Long,** *Blacksburg,* who is also director of the State Department of Health's New River Health District with headquarters in Radford. The Southwest Virginia region extends from Appomattox to the Kentucky line and from Clifton Forge to the North Carolina border; it encompasses a population of 1.1 million. Dr. Long was student health physician at VPI & SU from 1965-1970; before that, she practiced family medicine for 21 years in Portsmouth and Blacksburg.

At Central State Hospital, Petersburg, Dr. **Jagan M. Reddy** has been named chief of the medical staff. A staff psychiatrist and medical director of the unit for adolescents, Dr. Reddy from 1972-1976 was senior community psychiatrist at Union Hospital, Moose Jaw, Saskatchewan.

Dr. **F. Dixon Whitworth,** *Front Royal,* was honored recently at a meeting of the board of trustees of Warren Memorial Hospital for his long service in the area. The salute marked Dr. Whitworth's change of hospital staff status from active to honorary, at his request. He was given a framed resolution of appreciation expressing "heartfelt thanks for his 37 years of active participation on the medical staffs of Front Royal Hospital and Warren Memorial Hospital and for his wise counsel, hard work, and leadership".

Dr. **Percy Wootton,** *Richmond* internist and MSV councilor, has been appointed a member of the Lynchburg College Board of Overseers by the College's president, Dr. Carey Brewer.

Dr. **George J. Fleury, Jr.,** *McLean,* is an inventor as well as a surgeon. He has been granted a patent on an incentive spirometer that accurately measures the volume of air exhaled and inhaled, and encourages deep breathing. Dr. Fleury created the equipment because he noted that when patients take only shallow breaths after abdominal or thoracic operations, serious lung trouble may develop. The New York *Times* described the apparatus in a story in a recent edition.

With the spirometer, the volume of breath is measured by a floating piston inside a transparent plastic cylinder. Figures printed on the outside enable the patient to read the results as the piston points to them. The range is 500 to 3,500 cubic centimeters. The piston is moved by exhaled breath introduced in one end of the chamber and by inhaled breath at the other end. The patient breathes through the mouthpiece with a tube attached to the bottom or top of the cylinder.

Dr. Fleury believes his spirometer could aid also in early diagnosis of respiratory ailments and hopes it may be manufactured. It is designed for use by one person and is light enough to carry home from the hospital.

Dr. **Robert C. Livingstone,** *Petersburg* orthopedic surgeon, has joined Blue Cross/Blue Shield of Virginia as assistant medical director, responsible for peer and professional review activities. A native of Clarksburg, West Virginia, Dr. Livingstone has practiced in Petersburg for more than 30 years.

Dr. **William W. Ellis,** *Winchester,* is the new president of the board of trustees of Powhatan School in Boyce, Virginia.

New chairman of the Greater Richmond Community Foundation is Dr. **William H. Higgins, Jr.,** *Richmond.* He was elected recently by board members of the Foundation, which raises funds to be distributed to community organizations.

Dr. **Richard A. Mladick,** *Virginia Beach,* was installed as president of the Seaboard Medical Association of North Carolina and Virginia at its annual session in Nags Head this summer. Other Virginia physicians taking office with him were Dr. **John A. Cross, Jr.,** *Newport News,* and Dr. **John H. Furr,** *Norfolk,* both vice presidents.

The Family Astham Program described in the November issue of VIRGINIA MEDICAL was developed by a Planning Committee whose members have contributed importantly to its success. They are Gilberto Rodriguez, MD, Mitchell Rosenthal, PhD, William P. Spencer, MD, and **Joseph Vilseck,** MD, all of *Richmond.* The article was written by **F. Stanford Massie,** MD, and Susan Homestead, MSW, who are also members of the Committee.

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The Monthly Publication of The Medical Society of Virginia

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KEY TO ABBREVIATIONS

ar—annual report
b—book review
e—editorial
h—history
l—letter to the editor
ml—medicine and the law
*—medical article
m—memoir
pv—point of view
s—speech
sa—special article
ww—who's who

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